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U. S. DEPARTMENT OF AGRICULTURE
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U. S. Department of Agriculture

A
GUIDE
TO
Better
GARDENS

Portland Seed Company

109 Southeast Alder St.
Portland, Oregon





GARDENING BEGINS IN EASY CHAIRS

• Just as you are sitting here looking through this garden book, so are many of your neighbors. This year, over 500,000 western families will purchase Diamond Quality Seed from some 4,000 dealers now serving western people in practically every city, town, and hamlet. These local merchants are men of experience in the seed business and they have stocked Diamond Quality Seed because they know them to be of the highest quality money can buy. Why not go in and get acquainted with your Diamond Quality Seed dealer? He's a good man to know!

PORTLAND SEED COMPANY

PORTLAND

SEATTLE

EUREKA



Foreward

This "Guide to Better Gardens" is the result of an idea we have had in mind for several years.

To add something to the regular listings of seeds, trees and shrubs that come in the usual seed catalog that will help you in the planting, the cultivating, the fertilizing, and finally the protecting of the growing plants from pests. In other words a practical application of good practice in growing finer and better flowers and vegetables.

Through the help of Sunset Magazine and the Bodger Seed Co., growers of fine flowers, we have prepared and present you with this "Guide to Better Gardens."

It is our hope that this Guide, coupled with Diamond Quality Seeds as selected herein will result in your growing a better garden.

Portland Seed Company

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All Americans

Marigold Crown of Gold

The plants of the Collarette Marigold Crown of Gold are absolutely uniform in every respect, including such desirable characteristics as height of plant, general habit of plant, time of flowering, and character, size, shape, and color of flower heads.

Individual plants deviate very little from the average height of twenty-four inches. The lower branches are clustered near the ground level, while the higher branches are sub-opposite or alternate on the main stem. The principal stem runs through the plant and determines its ultimate height. The lower-most lateral branches are ascending, but are only about three-fourths the length of the main stem so that the plant assumes a top-shaped habit. The plants are extremely floriferous, which gives to a plant in full bloom the appearance of a large orange top with a green base.

The oil glands which occur in the leaves of other varieties of Marigolds and give to them their characteristic pungent odor are entirely absent or occur only as non-functional vestigial structures. As a consequence, the Collarette Marigold is entirely free from the pungent odor in all plant parts. The blossoms have a delicate but very delightful fragrance.

Seeds sown out of doors in the spring develop into plants that begin to bloom in July, and continue blooming until they are killed by frost. Pkt. 25c.

Sweet Pea Shirley Temple

We take real pleasure and pride in presenting to you this lovely new Sweet Pea, which, we believe, will soon become as popular with American garden lovers as the little cinema favorite, Shirley Temple.

This Sweet Pea which we consider the most beautiful we have ever offered, was obtained through a cross between Pinkie and Lady Gay. It has inherited blooms with the size and richness of color in Pinkie, plus the dainty frilled and fluted flowers of Lady Gay. The color is softer and more beautiful than Pinkie. The flowers are the largest we have ever seen on any Sweet Pea and it has long stems with four very large blooms on each stem.

We strongly urge everyone to include Shirley Temple in their sweet pea bed this year. Packets 15c.

Marigold Sunset Giant

These lovely Marigolds have the outstanding characteristics of being very showy, fragrant and exceptional in size. Not only are the flowers the largest ever known in the Marigold group, averaging 5 inches, but they are produced in such profusion that a plant of Sunset Giants is one of the showiest spots in any garden. This lovely variety of



MARIGOLD CROWN OF GOLD

Marigold is also free of any unpleasant odor so common in most varieties of this flower.

The flowers are loosely formed, very full centered, with broad, heavy petals gracefully overlapping to make a flower of great depth and even larger than Dahlia Flowered Zinnias. Sunset Giants is a mixture ranging from deep orange through golden orange, deep golden yellow, light yellow, lemon yellow, and a delightful new shade of primrose. Packets 25c.

Dwarf Double Golden Globe Nasturtium

This Gem Mixture, developed in response to the demand for a more compact growing strain of the semi-double, sweet-scented Gleam Nasturtiums, is the ideal annual for border and edging use. The plants are truly dwarf and compact, totally without runners, and hold their compact form even in rainy climates where they will be a boon to garden makers. An excellent color range which includes shades of yellow, orange, scarlet, crimson, salmon, cerise, cream, maroon and spotted varieties. Packets 20c.

Flaming Velvet Petunia

This lovely Petunia has caused a sensation because of the uniform excellence of its velvety, rich, blood-red flower. It has not yet been widely grown, but after this year will be classed among the popular Petunia varieties. The plants are semi-compact in habit, absolutely uniform, and the flowers are large and borne in great profusion. We are fortunate in being able to offer our customers a stock which is completely true. Packets 25c.

Phlox Drummondii Gigantea—Art Shades

A new strain of Phlox with flowers an inch and a quarter to an inch and a half in diameter. In addition to its enormous flowers it has a most wonderful range of color in soft art shades. The colors range as follows: cream eye, apple blossom, soft rose with white eye, light blue with white eye, pale violet with white eye and many other pleasing shades. The soft colors blended together make a most beautiful mixture and a color combination never before seen in annual Phlox. Packet 20c.

JANUARY This is the time to do your planning indoors for the year's gardening. A good time, too, to make your compost bed. Spread soil over compost materials to speed decay. Moisture helps also, as does spading the mass to increase bacterial activity. To protect half hardy plants from frosts, mulch the ground around and over them this winter while ground is frozen. but do not mulch too heavily so that plants can't push their way up. If leaves, straw, etc., are used, try light covering of brush, with mulching material over it. Spray with dormant type spray every deciduous tree, shrub and bush during January or February. Divide perennial plants and move those not in proper location, also order the new ones you want. Don't overlook ground peat or compost. Gather suitable rocks for your rock garden every time you take a drive.

FEBRUARY Trim up any rock garden plants and shrubs that need it now. Plant the bare spots with the plants you have desired so long. Plants with good balls of earth may be safely transplanted now. Watering is seldom necessary when planting is done this month. See that all plants are firm in their positions. This is the ideal time to sow seeds indoors. Sow in small, clean cans.

MARCH Prune and spray fruit trees or bushes before sap flows and buds burst. Give trees coating of lime and sulphur, or oil emulsion—very effective for certain scale insects. Spray thoroughly; it pays. Prune or plant shrubs, roses, ornamental trees and hedges. Fertilize trees and bushes this month. Divide and replant old clumps of perennial plants. Plant Sweet Peas and Gladiolus early. Plant tender annuals indoors early this month, in flats, hotbed or coldframe. Transplant to garden in mid-April.

APRIL Still too early in most years to plant flower seeds outdoors, but you can try in a small way. Buy seeds early; plant about one-fourth of each packet this month if weather is good. You may have annual flowers much earlier if seed is sown now. Make early plantings in small beds, in sunny, sheltered places. Transplant about mid-May. Do not plant flower seeds too thickly or cover too deeply—one-eighth of an inch is enough. Water constantly and well. If you plan a new lawn planting this spring, prepare ground now. (See "Lawns"). Don't expect your garden to put up

a good fight against insects and bad weather, if you starve it for plant food and moisture. Don't let insect pests and disease get a start.

MAY This is best planting month. At seed sowing time soil should be freshly turned and contain much moisture. Plant seeds thinly, not deeply; cover lightly, firm soil, provide moisture constantly during germination. Good common annual flowers of dwarf growth to fill in bare spots in your rockery are: Ageratum, Lobelia and Sweet Alyssum. For fragrance, try these annuals: Candytuft, Scented Stocks, Mignonette, double Nasturtium, Petunia, Pinks, Scabiosa, Sweet Alyssum, Sweet Peas, Sweet Sultan, Stocks and Verbena. For unusual foliage try: Castor Bean, Ice Plant, Mexican Fire Bush and Portulaca—all quick growing annuals that will help make your garden different.

JUNE Cultivate much in June. Look out for insect enemies this month. Spray or dust at first sign of trouble. Watch your Sweet Peas; moisten well. Avoid sprinkling the vines, however, as this fosters mildew. If mildew attacks them, dust with flowers of sulphur early in the morning. If you want blooms all summer and fall keep Sweet Peas from going to seed. Prune your annuals, especially those of spindling growth. Pinch out center shoots for more compact growth and extra blooms. Snip off all fading flowers in garden to prevent seed production. In late June take up Tulip bulbs; store in cool, dry, dark place for summer. Separate bulb clusters according to size. Cut back perennial Chrysanthemums from 1 to 1½ feet from the ground. Fertilize lawn early this month and water plentifully after fertilizing. Disbud all your roses. Pick off all lateral buds when still tiny and let strength go into terminal bud to produce perfect roses. Plant perennials now for full grown blooming plants next season, transplant in fall or winter. Start irrigating or sprinkling in earnest now.

JULY Plant Viola and Pansy seed this month for winter and early spring flowers. Plant perennials of all kinds and biennials in July for next season's bloom. Shade ground where you plant seeds now to keep surface from drying out and killing young seedlings. Freshly cut lawn clippings make a good spreading; no soil

month in the year

should be visible. This is a good time to start a compost bed with plant refuse and lawn clippings; also save leaves this fall and you will save money on fertilizer requirements. Water, fertilize and cut lawn regularly. After fertilizing water at once. Sow annual flower seeds now! Look over your rock garden. If not thriving, how is the soil? Best mixture for rock plants and alpines is one-half peat moss, one-fourth leaf mold and one-fourth garden loam. Never use clay—it packs and bakes; sand washes too easily. After clipping, water well and work in a little leaf mold or peat moss. Keep after your weeding.



AUGUST Cut your lawn every five to seven days and not too short. If too short, the yellow or brown undergrowth shows through. Snip off blooms of your annual flowers as soon as they are past their prime. Extra blooms will result. Annuals appreciate a good watering once a week. Plant perennials this month. Fall rains and natural hardening-off weather benefits them before winter rest, and in spring they emerge properly equipped by nature to bloom in their regular season. Spray, dust and bait the remainder of this year. Clean up waste plant material. Remove annuals that have finished blooming. Cut back perennials. Keep weeds out. Make rose cuttings this month. Remove all leaves, tie your cuttings in bundles with tops all in one direction and bury in moist soil six inches below surface (entirely covered) with tops down for three weeks. Then plant right side up, ten to twelve inches apart, with but one bud out of ground. Leave in nursery for one year and do not fertilize during this time. Use rich soil to start with. Take cuttings of all shrubby plants in much the same way.



SEPTEMBER Prepare now for planting spring flowering bulbs, such as—Hyacinths, Scillas, Muscari, Snowdrops, Crocus, Narcissus, Tulips, etc. This is your last month for lawn making. See "Lawns". Pull out annual flowers that are through blooming, to keep from going to seed. Light rains and foggy mornings do not take the place of good watering. Don't neglect good soakings this month. Transplant evergreen trees and shrubs now. Stake and support the tall things in your garden. Use wired wooden plant labels for labeling Dahlia roots and Gladiolus bulbs when dug for winter storage later in fall; also for

marking trees, shrubs and plants. Watch for moss in the lawn and rake out with a moss rake. Moss indicates sour condition of soil—apply a complete fertilizer.



OCTOBER Plant spring flowering bulbs now: Tulips, Daffodils, Narcissus, Crocus, Hyacinths, Scillas, Grape Hyacinths, Dutch Iris, Spanish Iris, Anemones, Chionodoxe, Eranthis, Galanthis, Ranunculus, Fritillaria, Ixia, Ornithogalum. Dig Gladiolus and Dahlia bulbs; dry and clean and then store in frost-proof place that is dark, well ventilated and is not too warm. Divide and transplant perennials that make early spring growth. Cut lawns regularly and fertilize with complete fertilizer. Remove matured plants and waste plant material from garden as early as possible. Add to compost pile; turn under. Gather up leaves as they fall, remove to compost heap, mix with a little earth. Indian Summer is a fine time to paint garden fences and furniture. Use Naphthalene Flakes when storing bulbs.



NOVEMBER Plant Sweet Peas for next season — deeper than for spring planting. Last chance to plant spring flowering bulbs—Tulips, Narcissus, Hyacinths. Early planting gives best results. Fertilize your lawn sometime this month with complete commercial fertilizer high in phosphates and potash. Set out Pansy plants for winter blooms. Plant Japan Quince, Snowberry, Oregon Grape. Sow seeds of Clarkia, Candytuft, Sweet Alyssum, Larkspur and other hardy annuals. Plant Roses, Oriental Flowering Trees, set out Hawthorns, plant conifers, and deciduous trees, maples, birches, etc.



DECEMBER Plan your next year's garden now. Make a diagram or drawing of your garden and mark location for your plants, thus avoid confusion by planning ahead for color schemes, arrangement, etc. If planting evergreens, leave a depression in the soil around them so that water shed by foliage will run back toward the trunk. If a mild winter, mow the lawn. Grass should not get too long during the winter. Spray fruit trees this month with reliable dormant spray such as lime and sulphur or oil-base spray. This kills many insects, prevents growth of moss and lichens. Cover entire surface of all branches. Spray again in spring. Remember your compost pile—adding leaves every day. If you have not already done so, mulch your lawn this month with ground peat.

Common and Botanical Names of Flowers and Plants

Adam's Needle	<i>*Yucca</i>	Flax	<i>Linum</i>	Passion Flower	<i>Passiflora</i>
African Blue Daisy	<i>Arctotic Grandis</i>	Fleur De Lis	<i>*Iris Germanica</i>	Peach Bells	<i>Campanula Persicifolia</i>
African Golden Daisy.....	<i>Dimorphoteca</i>	Floss Flower	<i>Ageratum</i>	Periwinkle	<i>Vinca</i>
African Lily	<i>*Agapanthus</i>	Flowering Maple	<i>Abutilon</i>	Pbeasant's Eye	<i>Adonis Aestivalis</i>
Allegheny Vine	<i>Adlumia</i>	Flowering Tobacco	<i>Nicotiana</i>	Pin Cushion	<i>Scabiosa</i>
Amethyst	<i>Browallia</i>	Forget-Me-Not	<i>Myosotis</i>	Pinks	<i>Dianthus</i>
Asparagus Fern	<i>Asparagus Plumosus</i>	Four O'Clock	<i>Mirabilis</i>	Polyanthus	<i>Primula</i>
Australian Pea Vine	<i>Dolichos Lignoses</i>	Foxglove	<i>Digitalis</i>	Poppy	<i>Papaver</i>
				Pot Marigold	<i>Calendula</i>
				Prince's Feather	<i>Amaranthus Cruentus</i>
Baby Blue Eyes	<i>Nemophila Insignis</i>	Garden Heliotrope	<i>Valerian</i>	Quaking Grass	<i>Briza</i>
Baby Primrose	<i>Primula Malacoides</i>	Gentian	<i>Gentiana</i>		
Baby's Breath	<i>Gypsophila</i>	Geum	<i>Avens</i>		
Bachelor's Button	<i>Centaurea Cyanus</i>	Globe Amaranth	<i>Gomphrena</i>		
Balloon Vine	<i>Love in A Puff</i>	Gold Dust	<i>Alyssum Saxatile</i>	Ragged Robin	<i>Lychnis</i>
Balsam Apple	<i>Momordica Balsamina</i>	Golden Bell	<i>Forsythia</i>	Red Hot Poker	<i>Tritoma</i>
Barberry	<i>*Berberis</i>	Golden Cbain	<i>*Cytisus</i>	Rock Cress	<i>Arabis</i>
Basket of Gold	<i>Alyssum Saxatile</i>	Golden Feather	<i>Pyrethrum Aureum</i>	Rocket	<i>Hesperia</i>
Beard Tongue	<i>Pentstamon</i>	Golden Rod	<i>Solidago</i>	Rose Campion	<i>Lychnis</i>
Bell Flower	<i>Campanula</i>	Grass Pinks	<i>Dianthus Plumarius</i>	Rose of Heaven	<i>Agrostema</i>
Black Eyed Susan	<i>Thunbergia</i>			Rose of Sharon	<i>Althaea</i>
Blanket Flower	<i>Gaillardia</i>	Harebell	<i>Campanula Carpatica</i>		
Blanket of Snow	<i>Alyssum, Sweet</i>	Hollyhocks	<i>Athaea Rosea</i>	Sand Verbena	<i>Abronia</i>
Blazing Star	<i>Liatris</i>	Honesty	<i>Lunaria</i>	Satin Flower	<i>Godetia</i>
Bleeding Heart	<i>*Dielytra</i>	Hops, Japanese	<i>Humulus</i>	Scarlet Sage	<i>Salvia Splendens</i>
Blue Bottle	<i>Centaurea Cyannus</i>	Horn of Plenty	<i>Datura Cornucopia</i>	Sea Bugloss	<i>Anchusa</i>
Bluets	<i>Centaurea Cyannus</i>	Hyacinth Bean	<i>Dolichos</i>	Sea Lavender	<i>Statice</i>
Boston Ivy	<i>Ampelopsis Veitchii</i>			Sea Pink	<i>Armeria</i>
Boxwood	<i>*Buxus</i>	Ice Plant	<i>Mesembryanthemum</i>	Smilax	<i>Myrsiphyllum Asparagoides</i>
Bridal Wreath	<i>*Spirea Prunifolia</i>	Indian Shot	<i>Canna</i>	Snapdragon	<i>Antirrhinum</i>
Bush Poppy	<i>Hunnemannia</i>			Sneezewort	<i>Achillea</i>
Butterfly Bush	<i>*Buddleia</i>	Jacobean Lily	<i>*Amaryllis Formosus</i>	Snow of Summer	<i>Cerastium</i>
Butterfly Flower	<i>Schizanthus</i>	Japanese Pinks	<i>Dianthus Heddewegii</i>	Snowball	<i>*Viburnum</i>
Butterfly Pea	<i>Centrosema</i>	Jerusalem Cherry	<i>Solanum</i>	Snow on the Mountain..	<i>Euphorbia Variegata</i>
Buttonwood	<i>*Plantanus Orientalis</i>	Job's Tears	<i>Coix Lachryma</i>	Speedwell	<i>*Veronica</i>
		Joseph's Coat	<i>Amaranthus Tricolor</i>	Spider Plant	<i>Cleome</i>
California Poppy	<i>Eschscholtzia</i>			Star of Betlehem	<i>*Ornithogalum</i>
Canary Bird Flower	<i>Tropaeolum Canariense</i>	Kenilwortb Ivy	<i>Linaria Cymbalaria</i>	St. Bruno's Lily	<i>*Anthericum</i>
Candytuft	<i>Iberis</i>	Kudzu Vine	<i>Thunbergia Pueraria</i>	Stocks	<i>Gilliflower</i>
Canterbury Bells	<i>Campanula Medium</i>			Stone Crop	<i>Sedum</i>
Cape Jasmine	<i>*Gardenia Florida</i>	Lace Flower	<i>Didiscus</i>	Straw Flower.....	<i>Acroclinium</i>
Cardinal Climber	<i>Ipomoea Quamoclit</i>	Lady's Ear Drop	<i>Fuchsia</i>	Straw Flower	<i>Helichrysum</i>
Cardinal Flower	<i>Lobelia Cardinalis</i>	Lady's Slipper	<i>Balsam</i>	Straw Flower	<i>Rhodanthe</i>
Castor Oil Beans	<i>Ricinus</i>	Larkspur	<i>Delphinium</i>	Straw Flower	<i>Statice</i>
Catchfly	<i>Silene</i>	Lavender	<i>Lavandula</i>	Summer Cypress	<i>Kochia</i>
Chinese Bell Flower	<i>Platycodon</i>	Leadwort	<i>*Plumbago</i>	Sunflower	<i>Helianthus</i>
Chinese Lantern Plant.....	<i>Physalis Franchetti</i>	Lemon Verbena	<i>*Aloysia Citriodora</i>	Sunplant	<i>Portulaca</i>
Clove Pink	<i>Dianthus Plumarius</i>	Lily of the Valley	<i>*Convallaria</i>	Swan River Daisy	<i>Brachycome</i>
Cockscomb	<i>Celosia</i>	Love Grass	<i>Nemophila</i>	Sweet Rocket	<i>Hesperis</i>
Columbine	<i>Aquilegia</i>	Love in a Mist	<i>Nigalla</i>	Sweet Shrub	<i>Calycanthus</i>
Cone Flower	<i>Rudbeckia</i>	Love Lies Bleeding ...	<i>Amaranthus Caudatus</i>	Sweet Sultan	<i>Centaurea Imperialis</i>
Coral Bell	<i>*Heuchera</i>			Sweet William	<i>Dianthus Barbatus</i>
Cornflower	<i>Centaurea Cyanus</i>	Maiden Hair Fern	<i>Adiantum</i>		
Cornflower Aster	<i>Stokesia</i>	Mallow	<i>Hibiscus</i>	Tagetes	<i>Marigold</i>
Cowslip	<i>Primula</i>	Marvel of Peru	<i>Mirabilis</i>	Tassel Flower	<i>Cacalia</i>
Crane's Bill	<i>*Geranium</i>	Matilija Poppy	<i>Romneya Coulteri</i>	Thimble Flower	<i>Gilia</i>
Cypress Vine	<i>Ipomoea Quamoclit</i>	Meadow Rue	<i>*Thalictrum</i>	Thrift	<i>Armeria</i>
		Mexican Fire Bush	<i>Kochia</i>	Tobacco	<i>Nicotiana</i>
Daisy, English	<i>Bellis Perennis</i>	Mexican Fire Plant	<i>Euphorbia Heterophylla</i>	Transvaal Daisy	<i>Gerbera</i>
Dogwood	<i>*Cornus Florida</i>	Mignonette	<i>Reseda</i>	Trumpet Flower	<i>Datura</i>
Dusty Miller	<i>Centaurea Gymnocarpa</i>	Mock Orange	<i>*Philadelphus</i>	Trumpet Vine	<i>Bignonia</i>
Dusty Miller	<i>Cineraria Candidissima</i>	Monk's Hood	<i>*Aconitum</i>		
Dutchman's Pipe	<i>Aristolochia</i>	Moonflower	<i>Iponoca</i>	Umbrella Tree	<i>Catalpa</i>
		Mountain Rose	<i>Antigonon</i>		
Edelweiss	<i>Gnaphalium</i>	Morning Glory	<i>Convolvulus</i>	Venus' Looking Glass ...	<i>Campanula Speculum</i>
Elephant's Ears	<i>*Caladium</i>	Mourning Bride	<i>Scabiosa</i>	Violet	<i>Viola Odorata</i>
English Daisy	<i>Bellis Perennis</i>	Musk Plant	<i>Mimolus Moschatus</i>	Virgin's Bower	<i>Clematis</i>
English Primrose	<i>Primula Vulgaris</i>	Myrtle	<i>Vinca Minor</i>	Virginia Creeper	<i>Ampelopsis Quinquefolia</i>
Evening Primrose	<i>Oenothera</i>				
Everlasting Pea	<i>Lathyrus Latifolius</i>	Nasturtium	<i>Tropaeolum</i>	Wallflower	<i>Cherianthus</i>
Everlastings	<i>Acroclinium</i>	Night Scented Stock	<i>Matthiola</i>	Wind Flower	<i>Anemone</i>
Everlastings	<i>Helichrysum</i>			Wormwood	<i>Artemesia Absinthium</i>
Everlastings	<i>Rhodanthe</i>	Orange Daisy	<i>Dimorphoteca</i>		
Everlastings	<i>Statice</i>			Yarrow	<i>Achillea</i>
Fairy Lily	<i>*Zephyranthes</i>	Painted Tongue	<i>Salpiglossus</i>	Youtb and Old Age	<i>Zinnia</i>
Feverfew	<i>Matricaria</i>	Pampus Grass	<i>*Cynerium</i>		
		Pansy	<i>Viola</i>		

*Plants generally grown from bulbs or rooted stocks.

Asters

Guide to Better Gardens

ASTERS are among the most useful decorative late summer plants for the amateur home gardener. They are easy to grow, require only normal care and give an abundance of flowers in return for the care given. In warm sections, seed can be sown directly in the garden after frost time. Here in the Northwest they should be started in flats indoors and the plants set out about the middle of May or thereabouts.

Asters like a rich soil, preferably rather sandy or loamy. They should be cultivated regularly and watered before the soil becomes too dry. Each plant must have plenty of space to develop fully without being crowded. The tall branching varieties should be set about 15 to 18 inches apart each way, and the medium growing sorts 10 to 12 inches apart, while the dwarf types can be as close as 8 to 10 inches.

Few, if any, important flowering plants are as seriously attacked by disease as the Aster. The most important of these diseases is the Aster Wilt.

Aster Wilt or stem rot is caused by a specific parasitic fungus. The disease is soil borne, meaning the fungus lives in the soil and is transmitted to the Aster plants from the soil. The fungus enters the plant through the root system, and gradually creeps up the stem through the vascular tissue and will eventually destroy the food and water bearing channels of the plant. When once introduced into the soil, the fungus persists indefinitely and may attack Aster plants which are growing there even years later. The spores of the fungus may be disseminated on Aster seed, on implements used in working the soil, or on anything which comes in contact with a diseased plant. It is, therefore, very evident that the wilt disease is widespread wherever Asters have been grown. So far, there is no known method of combating this disease, except by the use of wilt resistant seed.

Aster Super Giants are the latest development in the Aster field. The plants are robust and strong growing, 2½ to 3 feet tall with six or eight long, non-lateral stems per plant. The flowers are extremely large, as much as 6 or 8 inches across, with numerous long, graceful feathery interlacing petals. Their full shaggy effect has been likened to some of the looser varieties of Chrysanthemum. So far there are only two colors in the group. Los Angeles, a lovely soft shell pink, blending to creamy pink in the center. **Packet, 10c.** El Monte, a deep glowing crimson, the only large flowered crimson Aster on the market. The later variety is an earlier bloomer and is therefore suitable for planting in all localities. **Pkt., 20c**

The Improved Crego Wilt Resistant type is probably the best known of all Asters and is the most generally used. All varieties of this type are wilt resistant. The plants are about 2½ feet tall, branching in habit with long, strong stems, making the flowers well adapted to cutting as well as for garden use. The blossoms are good size, 4 to 5 inches across, fluffy, with numerous long, slender, curly tipped petals, full centered and of good substance. *We offer the following varieties: white, shell pink, deep rose,*



ASTER AURORA GOLDEN SHEAF

crimson, orchid, azure blue, purple and mixed.

Packets, 10c

The Improved Giant California Sunshine type is the highest development in its class, rightly called the most beautiful Aster in the world. The flowers, 4 to 5 inches across, are among the loveliest of all Asters, composed of a single row of loosely placed outer petals, contrasting with the unique quill-like center discs. The stems are long and extremely heavy, practically without lateral branches, while the plants are from 2 to 3 feet in height. They are mid to late season blooming. None of the varieties have been developed in wilt resistant strains. *We offer the following varieties: white, pink, lavender, violet, carmine and mixed.* **Packets, 10c.**

The Improved Giants of California curled and interlaced Aster. Plants are somewhat taller than the Super Giants and carry a few lateral branches. They reach a height of about 3 feet and usually carry from 8 to 10 or even 12 flowers per plant. The flowers are large and full, 4 to 5 inches across, with graceful, curly tipped petals. Late bloomers so seed should be started early indoors in flats. *We offer the following varieties: white, peach blossom, light blue, deep rose, dark purple and mixed.* **Packets, 10c.**

The Improved Queen of the Market are somewhat different from the old original strains. They have been developed for use as cut flowers as well as for border work with the result that the stems are comparatively long, about 10 to 12 inches, and strong. The plants are about 18 to 20 inches tall and bear generous quantities of medium sized, 2½ to 3-inch flowers. *We offer the following varieties: white, light blue, deep rose, scarlet, purple, peach blossom and mixed.* **Packets, 10c.**

Other types of Asters listed under Annuals and Perennials.



CALENDULA CHRYSANTHA

CALENDULA (Pot Marigold): (hA) Does well in sunny or partial shade. Hardy, stout growing, with entire bright-green, thickish leaves. Continual bloomer. Grows in any soil, but responds to moderately rich loam. *Grouping*—for bedding out; in front of shrubbery; for the mixed border, combining with Delphinium, Shasta Daisy, Salvia or Alyssum. *Varieties:* *Chrysantha*, buttercup yellow with incurved petals; *Orange Shaggy*, deep orange shading to lighter center; *Radio*, deep orange with quilled petals; *Balls Gold*, golden yellow, light center; *Balls Orange*, bright orange shades; *Campfire*, deep orange with scarlet sheen; *Double Mixed*. **Packets, 10c.**

CALLIOPSIS: (hA) Graceful for border plants, supplying throughout the summer an abundance of showy flowers of: yellow, crimson and maroon. Tall varieties excellent for cut flowers. Grows in any soil, but prefers a rich, light well fertilized loam. *Grouping*—with Coreopsis, Deep-blue Delphiniums, Snapdragons and Salvia. *Varieties:* *Tall Single Mixed*; *Tall Semi-Double Mixed*; *Dwarf Crimson King*, deep crimson with yellow backs; *Drummondii* (golden wave) golden yellow center; *Dark Brownish Red*. **Packets, 10c**

CANDYTUFT: (hA) Very showy, branching plant. Excellent for beds, masses, rock gardens and cut flowers. Blooming prolifically in spring, and during other seasons by successive sowing of seed. Grows in ordinary soil. *Varieties:* *Coronaria*, giant white hyacinth flowered; *Umbellata Type*, crimson, lilac, rose, cardinal, white, flesh pink, rose carmine and mixed. **Packets, 10c.**

CANTERBURY BELLS: (hB) The real bell flower. Branching plants heavily loaded with large pendant bells. Both in plain and cup and saucer types. Excellent for flower borders and rockery background. *Grouping*—with Scabiosa, Perennial Aster and Lupine. *Varieties:* *Campanula Medium*; single mixed, double mixed. *Calycanthema*, (cup and saucer); light blue, dark blue, white, rose pink and mixed. Annual Mixed, blossoms from seed in less than six months. **Packets, 10c.**

AGERATUM: (hA) Small balls of color in sizeable clusters. Constant bloomer from spring to fall. Culture—likes rich, light, well fertilized loam. Combines with Columbines, Scabiosa, Delphinium, French Marigold, Salpiglossis. *Varieties:* *Tall Blue Perfection*, 2 ft. tall; *Blue Perfection*, medium blue, large flowers semi-dwarf; *Little Dorrit*, white, dwarf; *Little Dorrit*, light blue, dwarf. **Packets, 10c.**

ALYSSUM: (hA) White, sweet scented edging and basket plants. For borders sow thickly. Grown best in rich, light, well fertilized loam. Combines with Violets, Forget-me-nots, Gypsophila. *Varieties:* *Benthami Martimum*, white sweet scented—1 ft.; *Little Gem*, white—6 inches; *Lilac Queen*, lavender—6 inches; *Dwarf*, white—3 inches; *Gold Dust* (saxatile compactum) perennial, yellow—1 ft. **Packets, 10c.**

AMARANTHUS: (hA) Does well in hot sunny places. 1-2 ft. tall. Related to Cockscomb. Grown for the vividly colored foliage and showy flower clusters. Does best in moderately rich light soil. *Position*—plant in borders in front of shrubbery. *Varieties:* *Caudatus* (love lies bleeding) crimson drooping flower spikes, tall. *Joseph's Coat* (tri-color) red, yellow and green foliage. Tall. Mixed Shades. **Packets, 10c.**

CHRYSANTHEMUM: (hA) Attractive long-stemmed summer flowering plant, wide varieties of color. Sow seed in flats and transplant when soil is warm. Height from 1 to 2 ft. *Grouping*—used in the annual and mixed borders, combining with orange and yellow flowers, or massed alone. *Varieties:* *Coronarum*, double mixed; *Carinatum*, single mixed; *Carinatum*, tall double yellow and tall double mixed. **Packets, 10c.**

CLARKIA (Rocky Mountain Garland): (hA) Grows from 12 to 18 inches tall and does well in sunny or light shade. Branching, erect plant, with smooth, light-green leaves. Furnishing an abundance of cut blooms as well as attractive green foliage. Grows in ordinary light garden loam. *Grouping*—plant with Larkspur, Pansies, Nicotiana or Virginia Stocks. *Varieties:* *Scarlet Queen*, *Salmon Queen*, *Fireband*, *Brilliant*, also *Single and Double Mixed*. **Packets, 10c.**

COLUMBINE (Aquilegia): (hP) Erect, branching plant, with long, slender stems. Will thrive in almost every situation, preferring partial shade and considerable moisture. Should be sprayed often to prevent aphids. *Groupings*—with Delphinium, Perennial Candytuft, Scabiosa, Stocks and Snapdragons. *Varieties:* *Mrs. Scott Elliott* (long spurred—pkt. 15c), *Pink Shades* (15c), *Blue Shades* (15c), *Silver Queen* (15c), *Copper Queen* (15c), *Double and Single Mixed*, packet 10c.

COREOPSIS (grandiflora): (hP) A spreading plant, with long, smooth, dark green lanceolate leaves; large, daisylike, golden yellow flowers. Plants grow from 1½ to 2 ft. Drought resistant; grows in any soil but best in moderately fertilized, light loam. *Grouping*—Blue Cornflower, Blue Salvia, Delphinium and Blue Larkspur. *Varieties:* *Double Sunburst*, large golden yellow fully double; *Lanceolata*, golden yellow semi-double. **Packets, 10c.**

COSMOS: (hA) Furnish an abundance of cut blooms during the early flower season. Seed sown in the open ground in April should bloom in July. Transplant not less than 18 inches apart. Pinching out tops when plants are a foot high makes them bushy and sturdy. Grow best in moderately rich, sandy loam. *Grouping*—Plant between shrubs; in the background of mixed border, combining with Shasta Daisy, Lavender, Poppy and Regal Lily. *Varieties:* *Orange Flare*, deep orange blooms early; *Klondyke*, orange; *Early Double Crested* (anemone flowered), pink beauty, white queen and mixed; *Early Flowering Mammoth*, light pink, crimson, white and mixed. **Packet, 10c.**

CARNATION: (tP) Grows from 1 to 1½ ft. Easily winter killed, should be sown in flats during March. Transplant to other boxes when plants are 1 inch high, transfer to open soil when ground becomes warm. Carnations are best planted by themselves. *Varieties:* *Chabaud Double Giant*, cardinal red, deep rose, flesh pink, mixed. (Annual) *Marguerite*, blooms four months from sowing, in mixed shades only. **Packets, 10c.**

DELPHINIUM (*perennial Larkspur*): (hP) 1 to 8 feet, according to species and kinds. Sun loving but endures slight shade. Blooms freely from May until late fall. Grows in a variety of soils, but prefers rich, well drained, rather light soils, fertilize with manures during growing period, complete plant food during blooming period; peat or leaf mold should be added to heavy soil, bone meal also helpful. *Grouping*—Columbine, Salpiglossis, Snapdragons, Stocks and Gladiolus. *Varieties:* *Wrexham Hollyhock Strain* (15c); *Gold Medal Hybrids* (15c); *Blackmore and Langdon Strains* (35c); *Bellamosa*, dark blue; *Belladonna*, light blue; *Finest Mixed*. **Packets, 10c.**

DIGITALIS (*Fox Glove*): (hP) 4 to 6 feet tall. Best in semi-shade, but will grow in sun. Long spikes that are crowded with large thimble-shaped blossoms beautifully spotted. Grows in any soil, but prefers a rich, well fertilized, light garden loam; harbors sow bugs and snails. Work Naphthalene in soil around the plants. *Grouping*—in perennial border, alone or grouped with Hollyhock, Canterbury Bells, Shasta Daisy, Poppies, etc. *Varieties:* *Purple, Rose, White and Mixed*. **Packet, 10c.**

GAILLARDIA (*Blanket Flower*): (A&P) 1 to 2 feet and spreading. Sun loving, but endures slight shade. Free blooming from early spring until late autumn frost. Gray-green, lobed, variable leaves with large daisylike flowers. Very hardy, tolerating most soils, avoid fertilizer containing too much nitrogen; drought resistant, growing well on sandy banks. *Grouping*—plant in mixed border with dark blue Delphinium, russet Snapdragons, Salvia or Chrysanthemums. *Varieties:* (*Perennials*) *Dazzler*, maroon red, golden yellow; *Portola Hybrids and Mixed*. (*Annuals*) *Lorenziana*, double mixed; *Single Mixed*. **Packets, 10c.**

GEUM: (hP) 18 inches tall. Best in sun, but tolerates some shade. Hardy plants, with rosette formation of large, rough, strawberrylike leaves; long flower stalks, bearing double roselike flowers. Sow seed in early fall or early spring, produces blooming plants in one year. Grows well in most light soils; attacked by soil pests, use Naphthalene Flakes in soil. *Grouping*—looks well with tall Lobelia, Michaelmas Daisy and Salvia. *Varieties:* *Mrs. Bradshaw*, scarlet; *Lady Stratheden*, golden yellow; *Mixed*. **Packets, 10c.**

GODETIA (*Satin Flower*): (hA) Grows from 1 to 2 feet tall in sunny or slightly shady places. Erect, slender branching plant; bright green, lanceolate leaves; large, expanded, single and double, satiny



DIGITALIS—FOX GLOVE

flowers. Seed should be sown in flats, transplanted when soil is warm. Grows in rather poor, sandy soil. *Grouping*—generally looks best alone, can be combined with Clarkia, Larkspur, certain Snapdragons and Stocks. *Varieties:* *Dwarf rose*, crimson, white, pink and mixed. *Tall Double Azelia Flowered carninea*, crimson, lavender, rich pink and mixed. **Packets, 10c**

GYPSOPHILIA (*Baby Breath*): (hA) These light airy plants have a hairlike foliage and produce a very lovely effect in the garden. Excellent with bouquets. Sow seed outdoors in early spring, repeat sowings for longer season of blooms. Thrive in moist moderately rich soil. Does well in rockeries. *Varieties:* *Grandiflora Alba*, true white; *Grandiflora Rosea*, pink; (*Perennial*) *Paniculata Alba*, single white. **Packets, 10c.**

HELICHRYSUM (*Monstrosum*): (hA) Strawflower, growing from 2 to 3 feet tall. Stout branched plant, with oblong-lanceolate, bright-green, stiff leaves. This hardy annual makes an excellent winter bouquet with its red, yellow and white flowers. Sow in the open and transplant or thin out to twelve inches apart. Should be planted in separate bed by themselves. *Varieties:* *Golden Ball*; *Scarlet Ball*; *Salmon Queen*; *Silvery Pink*; *Double Mixed*. **Packets, 10c**



LARKSPUR

blue trailing; Pumila Rosea, dwarf pink; Sapphire, blue white eye, trailing. Packets, 10c.

Marigold

THE African and French Marigolds are truly the amateur gardener's best friend. They are both hardy and colorful, which makes them ideal for all types of garden work. The Marigold usually begins to flower in the early part of July and continues to give out a succession of blossoms until the branches are destroyed by frost. When judiciously planted they add considerably to the gaiety of any flower bed, especially during the later months of the flowering season. The tall African Marigold is excellent when used as a background for medium-tall flowers of red and pink shades, or displaying its golden corollas among the evergreen shrubbery. While the more richly painted petals of the French Marigold is well calculated to contrast with the blue or purple varieties of Asters, since no plant displays a richer coloring of mahogany and gold.

These showy annuals may be raised by sowing seed in the open garden as soon as the soil is warm, but the more certain method of procuring fine plants is to sow the seed in flats or hot beds about the first of April. While the plants are developing in the flats they should have plenty of air circulation and moisture. When the young seedlings have reached a growth of about 6 inches and the soil has had an opportunity to warm up, they should be transplanted to their position in the garden.

During the past few years several new, outstanding varieties of Marigolds have been developed and we highly recommend several of these types for Northwest gardens. (See All American Page for this

HOLLYHOCK (*Althaea*): (hP) Grows 6 to 12 feet in sun or partial shade. Erect plants with spirelike, simple, hairy stems; large, rough, heart-shaped leaves; large, regular, round blossoms of various bright colors. Grows in any soil, enrich with sheep manure. Subject to rust. Control rust with fine dusting sulphur. *Grouping*—The stately Hollyhock is appropriate along walls, lattice fences, etc. Excellent when interspaced among shrubs. *Varieties: Double salmon rose, rose pink, scarlet yellow and mixed. Single mixed. (Annual) Single Mixed and Semi-double Mixed. Packets, 10c.*

LARKSPUR: (hA) Grows from 3 to 4 feet in sun and light shade. Erect, bushy plants, with light green, finely dissected leaves. Flowers quickly form after plant is once established. Seed can be successfully sown in early spring. For earlier blooms, plant in flats and transplant. Prefers a rich, well fertilized soil. Use a complete plant food. *Grouping*—Blue Lace Flower, Hybrid Delphiniums, Clarkias, Snapdragons and Candytufts. *Varieties: Giant Imperial Daintiness, lavender, White Spire, Lilac Spire, Blue Spire, Blue Bell, Carmine King and Miss California, deep rose on salmon. Exquisite Rose Pink and Mixed. Tall Double Flowered, bright rose, light blue, dark blue, white, La France (salmon pink), Los Angeles (brilliant pink) and mixed. Packets, 10c.*

LOBELIA: (hA) Grows 6 to 12 inches in sun or light shade. Trailing, or compact, bushy plants; variable, dark-green, bronzed, or light-green leaves. Irregular, small, tubular flowers, borne on slender pedicels, varying from light to dark blue. Excellent for borders, rock work and hanging baskets. For best results sow thinly in flats, covering with glass until seedlings are through soil. Transplant into a moist, well fertilized bed. *Grouping*—Gold Tuft, Iceland Poppy, Coreopsis, Siberian Wallflower and Pot Marigold. *Varieties: Crystal Palace Compacta, dwarf bright blue; Gracilis,*

year's novelty). Growers have at last overcome the one poor feature of these beautiful flowers. Namely, odor!

Dixie Sunshine Marigold occupies a sure place in the group of new Marigold types. It is a most charming and unique strain. The medium sized flowers, 2 to 2½ inches across, are fully double and ball-shaped, ingeniously composed of dozens of tiny five-petaled florets which are gracefully interlocking and daintily fringed in effect. The brilliant golden yellow color is well set off by the lush green foliage of the bushy, rather tall plants. **Packets, 20c.**

Double Royal Scot French Marigold. As modern in appearance as any flower now offered, Royal Scot is one of the most striking color combinations one could wish for. The large, well-formed double flowers are produced in abundance on plants from 24 to 30 inches in height, fine for garden or cutting. Color is a bold combination of mahogany and gold in symmetrical stripes. **Packets, 20c.**

Guinea Gold Marigold. While this type cannot be classed as a newer variety, its popularity and loveliness gives it special mention. The flowers are a gorgeous orange with loosely ruffled petals. The plants are free bloomers and practically all flowers are double. **Packet, 10c.**

Dwarf French Single: Diadem, mahogany red; Gold Star, yellow striped maroon; Legion of Honor, little brownies; Signata Pumila, very dwarf bright orange; Mixed colors. **Packets, 10c.**

Dwarf French Double: Golden Ball, golden orange; Lemon Ball, lemon yellow; Robert Beist, dark brownish maroon; Mixed colors. **Packet, 10c.**

Tall French Double: Royal Scot and Mixed colors. **Packet, 10c**

Tall French Single: Josephine, brown. **Packet, 10c.**

Tall African Double: Orange; Lemon, Mixed. **Packet, 10c.**

MIGNONETTE (*Reseda*): (hA) A branching plant, growing 6 to 10 inches high, with dark-green, spatulate leaves; close-set, spike-like racemes of very fragrant flowers, blooming normally in August, but also in other seasons. Can be grown easily from seed and should be planted in rich light loam. *Grouping*—this plant does exceedingly well with practically all annuals. Should be planted in places where color is needed. *Varieties*: *Odorata Grandiflora, white*; *Victoria Perfecta, brilliant red*. **Packets, 10c.**

MORNING GLORY: (hP) Plant in a sunny place. Grow from 6 to 18 feet, with slender, climbing or twining stems. Variable, lobed or parted leaves with long, funnel-shaped flowers. A constant bloomer from June until September. Seed should be notched if hastened germination is desired. Does best in strong, fertilized soil with plenty of water. Plants should be cut down each fall for new growth. *Grouping*—should be planted separately for covering garages, fences or pergolas. *Varieties*: *Major Tall Mixed*; *Japanese Fringed Mixed*, *Clarks Mammoth Blue, sky blue shading to yellow in throat*. **Packets, 10c.**

Nasturtiums

GLORIOUS GLEAM Hybrid Nasturtiums have taken the plant world by storm. Delightfully sweet scented, beautifully double and in a remarkable color range, they fulfill all requirements for an all-round garden favorite. The color range includes a brilliant blend of salmon, golden yellow, orange scarlet, cerise, cream, orange, maroon and crimson shades, as well as many spotted varieties. **Packet, 5c.**

Golden Gleam Nasturtiums, the first of the newly developed double, sweet scented nasturtium and by far the most popular. These plants are semi-dwarf, bearing the flowers well above the light green foliage on long, wiry stems. The flowers are especially fine for both garden and cutting.

Packet, 5c

Scarlet Gleam Nasturtium is now fully double and will come true to color: The flowers are large and full petaled, waved and fluted in effect, and extremely showy. Completely covering the foliage of the plant, the long stemmed orange scarlet flowers make a dazzling splash of color. Richly sweet scented, Scarlet Gleam is ideal for garden and cutting. **Packet, 10c.**

For those who still prefer the good old fashioned type, we offer the dwarf mixed and tall mixed.

Packet, 5c

PHLOX DRUMMONDI: (A&P) Plants growing from 6 inches to 3 feet, according to type. Creeping and erect forms, smooth or pubescent. Leaves variable; salver-shaped flowers in bright colors, blooming in spring, summer, or early fall, according to kind. Perennial Phlox should be kept moist during the dry season, mulch with peat moss or leaf mold during winter and summer. Cut plants back after flowering season. Annual Phlox prefers a somewhat moist, light, porous soil, containing gritty material. Goes well with Verbenas, Petunias, Gypsophila and Snapdragons. *Varieties*: *Chamois Rose, carmine eye*; *Crimson*; *Scarlet*; *White*; *Isabellina, pale yellow*; *Mixed*; *Star Phlox and Dwarf Mixed*. *Decussata Perennial Mixed Phlox*. **Packets, 10c.**

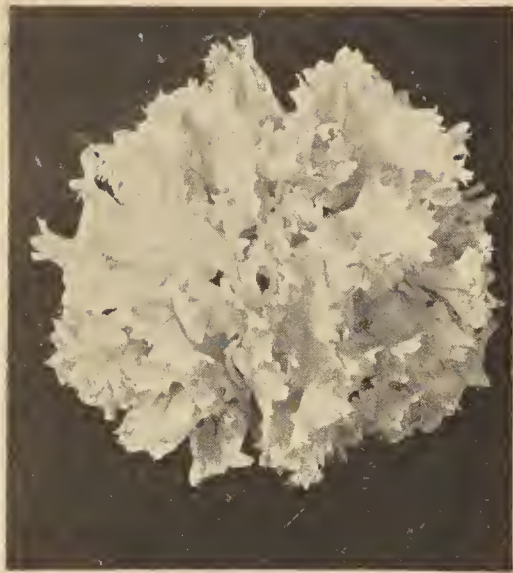
PANSIES (*Viola Tricolor*): (hA) A low-growing border and bedding plant, best with sun and mod-



DOUBLE GLEAM NASTURTIIUM

erate shade. Bushy plant, with oval or heart-shaped leaves. Irregular, fragrant, spurred, flat-petaled flowers in many colors, blooming from March into fall. Seeds should be sown in late August for early blooming, in spring for late spring and summer blooming. Spring sown seeds should be planted in flats and transplanted just before blooms appear. Pansies should grow in light, sandy or peaty, well fertilized, moist soil; provide mulch for winter protection. Use Naphthalene Flakes for protection against soil pests. *Grouping*—in separate bed or with Alyssum, Columbine, Yellow Snapdragons, Iceland Poppy, etc. *Varieties*: *P.S.C. Super Giant Swiss Mixed (20c)*; *P.S.C. Growers' Special Mixed (20c)*; *Oregon Giant Mixed*; *Adonis, light blue with white center*; *Cornflower Blue*; *Giant Dark Blue*; *Giant Striped*; *Golden Queen, pure yellow*; *King of the Blacks*; *Madam Perret, dark wine pink with red frilled petals*; *Snow Flake, pure white*; *Violet Blue, dark blue*; *Master Piece, giant ruffled*. **Packets, 10c.**

PINKS (*Dianthus*): (A&P) Grows from 10 to 14 inches high, and bears beautifully colored single and double blossoms in profusion all summer. For best results seed should be sown in flats and transplanted when soil is warm. Largely used for borders or massed in beds. Excellent for cut flowers. *Grouping*—can be planted in separate beds or with Snapdragons, Delphiniums, Stocks, Carnations, Sweet Williams and Petunias. *Varieties*: (*Annuals*) *Chinensis, flowers produced in clusters, single and double mixed*; *Heddewigi Double, Fire Ball scarlet, Salmon*



DOUBLE FRINGED PETUNIA

King deep pink, Snow Ball white, Mixed; (Perennial) Clove Pinks, Pheasant's Eye single mixed, Pheasant's Eye double mixed, Single Mixed and Double Mixed. Packets, 10c.

SALVIA: (hA) 1 to 3 feet. Should be planted in a sunny location. Erect, branching plants, with variable leaves and irregular, tubular flowers, blooming in summer or fall. Will grow in ordinary soils, fertilize with sheep manure. Best with background of shrubs having dark-green, glossy leaves. *Groupings*—Plant with yellow Lupine, yellow Snapdragons, Calendulas or deep blue Delphinium. *Varieties:* *Azure Grandiflora, sky blue; Bonfire, clear red; Splendens, brilliant scarlet; Zurich, dwarf early mixed. Packets, 10c.*

Petunias

THE garden petunias are very popular tender annuals, widely used for bedding, window boxes, pot plants, or for the border. They are all best treated as tender annuals, the seed started indoors or in the greenhouse 7 to 8 weeks before the plants are to be put outdoors. This should not be done until warm weather is settled. Nearly all the strains are summer bloomers and will stand no frost. Those who do not wish to start the plants indoors can sow seed (after frost time), but such plants will be delayed in flowering.

Unfortunately, petunias, while often self-sown in some of the strains, are quite likely to revert to a wild type, so that self-sown seedlings are pretty sure to deteriorate. It is advisable to weed out these second growth Petunias and reseed each year with fresh seed.

Petunias require a rich, light, well fertilized soil, however, the fertilizer should not be applied until after the plants are established, then use a good complete plant food. A liberal amount of peat moss or leaf mold, or both, should be worked into the bed before planting. When setting out transplants be careful to avoid the direct sun as tender Petunia plants will wilt rapidly.

Petunias have enjoyed great popularity in recent years, and the focus of interest lately has centered on the dwarf growing, compact types, of which the new Martha Washington ushers in an entirely new version. The plants are about nine inches tall, in a perfect ball effect, actually covered with dozens of the delicately ruffled medium-sized flowers. The color itself is an interesting combination, blush pink at the edges, deepening to dark violet in the throat, with heavy veining. It comes exceedingly true to color and type, and is excellent for use as a bedding, border or window box plant. **Packets, 15c.**

Miniature Petunias Rose Gem and Pink Gem. These two charming types have filled a vacancy home gardeners have had for years. Where a low, solid bed of color is needed nothing does quite as well as these two varieties of miniature petunias. The plants are neat and compact, 5 to 6 inches in height and smothered with richly colored blossoms about 2 inches in diameter. Rose Gem (15c); Pink Gem (10c).

Giants of California are the largest of the single flowering petunias. The flowers are completely ruffled with large, graceful throats. Excellent in beds by themselves or grouped with Dwarf Lobelia. Mixed colors. **Packets, 15c.**

Dwarf Giants of California are a compact form of the above. Especially fine for potting and also good well in a bed with the taller variety. **Packets, 15c.**

Varieties: Bedding Petunias; Balcony Blue; Balcony Rose; Balcony White; Rose of Heaven; Rosy Morn; Single Mixed. All Packets, 10c.

Taller varieties of Petunias: Elks Pride, deep purple, 25c; City of Portland, pink, 25c; General Dodds, blood red, 25c; Dainty Lady, delicate golden yellow, 25c; Double Choice Mixed, 25c; Double Fringed Mixed, 35c.

POPPY (Papaver): (A&P) Flowers growing from 6 inches to 4 feet, according to type. Erect plants, with usually hispid, coarsely toothed, pinnatifid leaves. Small to large globular, brightly colored flowers, blooming in spring and summer. Perennials are planted in fall and annuals in early spring. All types require a well drained, moderately rich, light loam, not too much moisture. *Grouping*—Effective by themselves, or grouped in a mixed border with yellow and orange Snapdragons, Lobelia, tall, Violas, etc. *Varieties: (Annuals) Shirley, double mixed; Carnation Flowered, tall double mixed; American Legion, single brilliant orange; Flanders, single blood red; California Poppy (Aurantiaca), orange. (Perennials) Elmonte Tangerine, orange; Oriental Mixed. Packets, 10c.*

SALPIGLOSSIS (Painted Tongues): (hA) 1 to 2½ feet in height and should be planted in a sunny place. Erect plants, with oblong, wavy-toothed, dark green leaves. Large, tubular, velvety textured, lily-like flowers in bright and gaudy colors, blooming from early June into fall. Seed may be sown in outdoor beds but best results are obtained from starting in flats. Requires a rich, light, well fertilized, well drained loam. *Grouping*—Impressive in front of dark-green foliage, and in mixed borders with Salvia, Lobelia, Siberian Wallflower, stocks. *Varieties: Brown and Gold; Scarlet and Gold; Violet and Gold; Purple and Gold; Rose and Gold; Crimson and Gold; Yellow; Mixed. Packets, 10c.*

SCABIOSA (*Pincushion Flower*): (hA) 1½ to 3 ft. tall. To be planted in sun or semi-shade. Bushy plants with divided foliage and dense heads of irregular flowers, blooming in spring, summer and fall according to type. Seed can be sown outdoors, but earlier blooms can be had if started in flats. Grows well in ordinary soils, but favors well fertilized, somewhat sandy loam. *Grouping*—combine with Ageratum, Snapdragon, Perennial Phlox, Sweet Williams and Stocks. *Varieties*: *Azure Fairy*, blue; *Peach Blossom*; *Fire King*, scarlet; *Flesh Color*; *King of the Blacks*; *Loveliness*, pink; *Double Mixed*. (Perennials) *Japonica*, lilac. **Packets, 10c.**

SCHIZANTHUS (*Poor Man's Orchid or Butterfly Flower*): (hA) Grows 1 to 1½ feet, and should be planted in sunny place. Erect, slender branched with bright green, finely divided leaves. Butterflylike flowers that are varicolored and blotched in many colors. Seed should be sown in early spring in rich, well fertilized, sandy loam. *Grouping*—excellent in masses; for the mixed border, combining with Gypsophila, Virginia Blue Bells and Gerbera. *Varieties*: *May Blossom*, rose pink; *Brilliant Mixed*. **Packets, 10c.**

STOCKS (*Gillyflower*): (hA) Grows from 1 to 2½ feet tall, depending on type. Prefers sun with slight shade. Stiff and branching plants with smooth, bright green, oblong leaves. Blossoms are very fragrant, coming in small single or large double varieties, depending on type. Plant in well drained, rich, light loam; fertilize with complete plant food; pinch back young plants; plant close together, rogueing out single flowered plants later, if undesired. Use peat moss in preparing bed. *Grouping*—Very effective alone, or combined with Sweet Sultan, Violas and Pansies, Snapdragons, Daffodils, Tall Marigolds. *Varieties*: *Double Early Giant Imperial*, rose; *Elks Pride*, purple; *Canary Yellow*; *Blood Red*; *White and Mixed*. *Double Perfection Branching*: *Princess*, white; *La France*, pink; *Brilliant*, blood red; *Sapphire*, violet; *Creole*, canary yellow; *May Queen*, pale blue; *Rose Pink and Mixed*. *Virginia Stocks*: *Rose*, *Mixed*. *Evening Scented Stocks Mixed*. **Packets, 10c.**

SNAPDRAGON (*Antirrhinum*): (hA) Annuals, many times becoming perennials. Grows from 1 to 3 feet. Sun and partial shade. Erect, bushy plants with smooth, clear green leaves. Medium to large-sized, tubular, two-lipped flowers in loose spikes, coming in many lovely colors and shades that bloom profusely from early spring to late fall. All Diamond Quality varieties are rust proof. Remarkably adaptable to different soils, but prefers rich, light, well fertilized garden loam. Cut back good plants for second growth. *Grouping*—many distinct varieties with distinct colors only should be used, using colors together that harmonize. Looks well with Scabiosa, Gladiolus, Larkspur, Delphinium, Clarkia and Chrysanthemum. *Varieties*: *Majus Rust Proof Varieties*: *Butter Cup*, canary yellow; *Copper Shades*; *Pink Shades*; *Scarlet*; *Shasta White*; *Fiery Red*; *Mixed*. **Packets, 10c.**

SWEET WILLIAM (*Dianthus Barbatus*): (hP) 10 to 20 inches in height. Prefers sun or light shade. Forming a dense mat of light to dark green, often colored leaves, and dense, round headed cymes of hairy-petaled, medium sized flowers, blooming over a long period. Their large color range makes them excellent for cut flowers. *Grouping*—Useful as border plants and in mixed borders, combining, according to color with Snapdragons, Delphiniums, Stocks, Carnations, Phlox and Petunias. *Varieties*: *New Port Pink*; *Scarlet Beauty*, orange red; *Dark Crimson*; *White*; *Single Mixed and Double Mixed*. **Packets, 10c.**



RUST PROOF SNAPDRAGON

VERBENA: (hhP) Perennial, usually treated as an annual. Grows 6 to 8 inches but exceedingly spreading. Requires plenty of sunshine. Densely branching, with dark green, wrinkled, dissected leaves. Dense cluster of medium sized, salver-shaped flowers. Blooming from May often into winter. Grows in any type of soil, but best in rich, light, moderately fertilized loam. *Grouping*—Fine border plant; in parkings; foreground of shrub border; in the mixed border, combining with Petunias, Shirley Poppies, rose and red Snapdragons and Stocks. *Varieties*: *Golden Queen*, golden yellow; *Scarlet Defiance*, orange red; *Pink Shades*; *Blue Shades*; *Mixed*.

Packets, 10c

WALL FLOWER (*Cheiranthus Cheiri*): (hsP) Half shrubby perennial growing from 2 to 3 feet. Sun loving, but endures a little shade. Woody plant, with ribbed stem and dark green lanceolate leaves. Medium sized, mustardlike flowers in dense clusters. Seed in early fall and early spring. Grows in most types of soil but prefers well fertilized, light loam. *Varieties*: (Perennials) *Cheiranthus Cheiri*, yellow shades; *Siberian Wall Flower*, brilliant orange (for rock plants); (Annuals) *Blood Red*; *Paris Market*, brown; *Mixed*; *Double Early Wonder Mixed*.

Packets, 10c

Growing Better
Sweet Peas

See Page 15



ZINNIA FANTASY

Zinnias

ZINNIAS are of the easiest culture, thriving in almost any soil and under almost all conditions. While they respond readily to special treatment, they will also thrive under the most adverse conditions. It is this characteristic which makes them especially valuable in the hot, torrid regions of the Southwest and those sections which have lately been experiencing unusual conditions of drought. Natives of Mexico, they are happiest in the hot, dry conditions characteristic of their land of origin.

While seedling plants of Zinnias can be transplanted, they do best when the seed is sown directly in the soil where the plants are to flower. Never sow your Zinnia seed, however, until the soil is warm and danger of low temperatures is past. This would probably be from the 10th to 15th of June during normal years. For best results, provide a rich, deep soil and give water when needed. For the fullest development of the plant, the Giant types should be no closer than 18 inches apart each way, and the smaller growing kinds 10 to 12 inches apart. This will allow free branching for sturdy plant development, and will assure the production of large, well formed double flowers.

Zinnias are very fast growing annuals during the summer months and successive sowings can be made all through the summer and as late as the first of August.

Fantasy Zinnia is the most recent introduction and the best known in the semi-tall type. The plants are about 2½ to 3 feet in height, neat in habit, strong growing and very free flowering. The flowers are very informal in appearance, composed of a mass of shaggy, ray-like petals, which give a delicate, graceful effect, quite distinct from the stiff formal Zinnias to which we are accustomed. They

are rounded in shape, of medium size, around 2½ to 3 inches, carried on good strong stems, and are excellent keepers. Fantasy is available only in a Mixture of lovely colors. **Packet, 10c.**

The California Giant strain is, in some ways, a companion type to the Dahlia Flowered. The plants are, however, taller than the Dahlia Flowered, reaching a height of 3 to 4 feet, with longer, strong stems, which are particularly adapted for use as a cut flower. The flowers themselves are very large and well formed, with a smooth topped, graceful appearance, the petals lying flat upon each other. We offer the following varieties: *Cerise Queen; Lavender Gem; Rose Queen; Violet Queen; Grenadier, dark red; Golden Queen; Daffodil, canary yellow.*

Packet, 10c

The Dahlia Flowered type comes first to mind under the tall large flowered varieties. Plants in this group are strong and robust growing, about 3 feet tall, and bear many long stems of the showy, double, huge flowers, which closely resemble the Show type of Dahlia. This type is preferred for general garden use, producing a very brilliant mass of color, in bright, intense shades. The plants, however, are rather stocky and the stems not quite as long or as well adapted for cutting as the California Giant group. The flowers, themselves, are more or less cup-shaped in appearance; the petals, instead of lying flat upon each other, are incurved, producing an upstanding, stiff, somewhat coarse flower. The blooms, when well grown, will reach a diameter of six and sometimes seven inches. The general average, however, would be 4½ to 5 inches. Flowers are produced within about sixty days from the time of planting. We offer the following varieties: *Exquisite, light rose; Golden State, golden yellow; Crimson Monarch, deep crimson; Dream, rosy lavender; Scarlet Flame; Oriole, orange; Meteor, true red; Polar Bear, white; Mixed.*

Packet, 10c

Lilliput of Pompon Zinnia, sometimes known as the Baby Zinnias. It is among the most popular for cut flower use and is steadily becoming more popular as a garden variety. The flowers are small, compact and symmetrical in shape, 1 to 1½ inches in diameter, borne in great quantities on neat, compact growing plants which usually reach a height of from 12 to 15 inches, but which may be forced in semi-shade or in the greenhouse to a height of 2 to 2½ or even 3 feet. Lilliput Zinnias have been found to be especially effective when used in combination with other flowers. We offer the following varieties: *Salmon Rose; Canary Yellow; Rosebud; Scarlet Gem; Crimson Gem; Golden Gem; Mixed.*

Packet, 10c

Cut and Come Again of Pumila Dwarf Double type is one of the oldest double Zinnias known. It was the first really double Zinnia developed from the early single forms and has retained a certain amount of popularity ever since. Plants are about 12 to 18 inches in height. Flowers about 2 inches in diameter, well adapted for use as a cut flower. We offer the following varieties: *Crimson; Pinkie; Golden Orange; Salmon Rose; Mixed.* **Packet, 10c.**

Scabious Flowered Zinnia. The flowers are medium in size, 1½ to 2 inches across, fully crested in the center, with a row of guard petals flanking this crest. The plants are 2 to 2½ feet in height, branching and free flowering. Mixed Shades.

Packet, 10c

Growing Better Sweet Peas

THE sweet pea is perhaps the mostly highly developed of all annuals. Its culture affords pleasure to millions; the production of seeds is an important industry, while as a commercial cut flower it is one of the most popular crops. The sweet pea was first introduced into England from Sicily in 1700, but not until some 150 years later was it seriously taken in hand by Henry Eckford who raised and introduced more than 200 varieties. To celebrate its 200th year in England, a great show was held in London in 1900, and large annual sweet pea shows have been held in London ever since. In 1904 Countess Spencer, a wavy-petaled sport of Eckford's Prima Donna, was introduced, and caused such a furore that within a few years the smooth-petaled varieties became obsolete. From the time Eckford began his work to the present time there are records of more than 3000 varieties, but not more than 300 are now in cultivation.

Sweet Peas are essentially cool weather plants, and they quickly fade away if the temperature persists for long above 75. In the sea-cooled areas of the Pacific Northwest, sweet peas can be grown successfully throughout the summer. An early start is highly important. The plants must be well established before hot weather arrives, but if the heat is extreme and persistent, nothing will keep the plants growing vigorously, though it is possible to carry the plants through July and even later if a cheese-cloth shading is erected over the plants.

There are two methods of culture or training, natural and exhibition. The former gives quantities of fair-sized flowers on medium stems. All the laterals are allowed to remain, except that it is sometimes advantageous to cut back the leading growths when they harden, and allow the younger growths to carry on. When once the vines becomes woody, short-stemmed flowers are certain. Exhibition or cordon growing means fewer but giant flowers, sometimes as many as five and six, on stems 18 inches long. This system is not, however, worth while unless climatic or other conditions permit the plants to grow well into summer, as the finest flowers cannot be obtained until the plants attain a height of 4 feet or more. The plants should be planted 9 inches or so apart and allowed to carry two or three main growths. All side shoots or laterals that appear in the leaf-axils must be pinched out, leaving only the flower buds that likewise appear in the leaf-axils. So treated, the plants, if conditions permit, grow 8 feet or more, but can be kept down to a reasonable height by training. Exhibition plants need constant attention and much tying, especially if bamboo stakes are used for supporters. To insure continuous flowering, no seed pods should be allowed to develop.

All Diamond Quality sweet peas are of the Spencer strain, however, we offer two types of this strain. The early flowering Spencers and the standard varieties. The early flowering types will produce larger blossoms but do not bloom so profusely as the standard varieties.

EARLY FLOWERING SPENCER SWEET PEAS

Packet, 10c; 1 ounce, 45c. Postpaid.

Early Marine. The clearest true blue of all sweet peas. An extremely vigorous type.

Early Columbia. Lovely rose standard with light pink wings. Distinctive color and heavy cropper.

Early Giant Rose. Truly the best rose variety. Warm rose pink. Splendid form with extreme size of flower.

Early Harmony. Very popular clear lavender with large flowers, vigorous growth and fine color.

Early Oriental. Clear deep cream colored variety with black seeded center. Bears exceedingly wavy blooms.

Early Silver Blue. The color is described by its name. A beautiful shade of light silver blue.

Early Snowstorm Improved. Clear white blooms. Giant frilled flowers on long sturdy stems.

Early Apollo. Extremely long stems, bearing fine bold flowers of soft salmon cerise.

Early Vulcan. Vivid sun-proof scarlet. The most outstanding and best known early red.

Early White Harmony. Glistening pure white with vigorous long stems and large blossoms. The ideal florist variety.

Early Pride. A lovely deep cerise, beautifully tinged with scarlet. Even brighter than "Glitters".

Early Spring Song. Bright rose pink flushed salmon. The most brilliant cream pink and very popular.

Early Flowering Spencer Mixture. A well blended mixture, containing all of the above colors and additional shaded. Packet, 10c; 1 ounce, 35c. Postpaid.

SUPERB SPENCER SWEET PEAS

Packet, 10c; 1 ounce, 35c. Postpaid.

PINK AND CREAM

Fluffy Ruffles. Light cream pink.

Ascot. Clear light rose pink.

What Joy. Large, primroses, shaded to cream.

Pinkie. Large flowers in fours. Deep rose pink.

Mary Pickford. Cream pink, faintly tinted salmon.

Magnet. Rich cream pink.

Winnie Morse. Cream ground, lightly flushed rose pink, duplexed frilled.

Bon Bon. Rich pink.

RED AND MAROON

Welcome. The most dazzling of all scarlets.

Charming. Brilliant, rosy cerise.

Flamingo. Orange scarlet cerise.

Sybil Henshaw. Giant. Deep crimson.

Doreen. Huge, bright, rose carmine.

Warrior. Rich oxblood maroon.

ORANGE AND SALMON

Barbara. Beautiful shade of orange salmon.

Good Cheer. Charming begonia rose.

Gloriosa. Bright, orange scarlet.

Idyl. Giant flowers in fours. Salmon pink. Waved.

Royal Pink. Large, pure pink.

Celebrity. Brilliant orange.

Tangerine Improved. Rich salmon orange.

Pirate Gold. Deep golden orange.

LAVENDER, BLUE AND MAUVE

Austin Frederick Improved. Pure lavender.

Powerscourt. Clearest lavender.

Fortune. Rich, dark blue.

Gleneagles. Lavender blue.

Olympia. Giant, rich purple.

Reflection. Clear cornflower blue.

Chieftain. Pure satiny mauve (deep lavender).

WHITE AND PICOTEE

Youth. Pure white edged soft pink.

Avalanche. Giant, pure white.

Standard Spencer Mixed. A splendid mixture, containing many of the varieties in our general list of Spencers. Packet, 5c; ounce, 20c. Postpaid.

Other Varieties of Perennials

- Arabis** (*Rock Cress*); white rock plant.
- Anchusa** (*Sea Bugloss*); blue flowers growing 6 ft.
- Ampelopsis** (*Virginia Creeper*); fine climber.
- Ampelopsis** (*Boston Ivy*); shiny green leaves.
- Anemone** (*Wind Flower*); St. Brigid double mixed.
- Antigonon** (*Mountain Rose Coral Bells*).
- Armeria** (*Sea Pink*); lilac rose—rock plant.
- Agrostemma** (*Rose of Heaven*); crimson, 12 in.
- Asparagus Plumosus** (*Asparagus Fern*); house plant.
- Asparagus Sprengeri** (*Emerald Feather*); house plant.
- Begonia** (*Wax Flower*); rose and bronze foliage.
- Bachelor Button** (*Centaurea Cyanus*); double rose, blue, mixed and single mixed.
- Cineraria**; semi-dwarf (25c), star flower mixed (25c), ordinary mixed (15c).
- Canna**; a greenhouse plant.
- Cerastium Tomentosum** (*Snow in the Summer*); white flowers.
- Cobea Scandens** (*Cathedral Bells*); blue climber.
- Coleus**; greenhouse plant, mixed colors (15c).
- Chairanthus** (*Siberian Wall Flower*); brilliant orange.
- Dahlia**; Coltness Mignon, mixed dwarf bedding; double mixed; single mixed.
- Daisy, Bellis Monstrosa** (*English Daisy*); double red, rose, white and mixed.
- Daisy, Shasta**; double (15c), single (10c).
- Dracena**; greenhouse plant.
- Gerbera** (*Transvaal Daisy*); mixed colors (15c).
- Geranium**; Zonale mixed, Lady Washington (15c).
- Heuchera** (*Coral Bells*); crimson color (15c).
- Kudzu Vine** (*Jack and the Bean Stalk*); climber.
- Linum** (*Flowering Flax*); perennial blue, 2½ ft.
- Lupins**; Perennial mixed.
- Nepeta** (*Gray Catmint*); blue color.
- Primula** (*Primrose*);
MALACOIDES (*baby primrose*) light lilac.
KEWENSIS; golden yellow (15c).
VERIS (*cowslip*) mixed colors.
VULGARIS YELLOW (*True Yellow Primrose*).
OENTHERA; evening scented.

- Pyrethrum**; single mixed.
- Pentstemon** (*Beard Tongue*); mixed colors.
- Poppy**, Oriental; mixed colors.
- Poppy**, Sanford's Giant Mixed.
- Poppy**, Sunbeam Hybrids; mixed.
- Rock Garden Mixture**; wide variety of color.
- Silene** (*Catchfly*); purple, white and mixed.
- Statice Latifolia**; Perennial blue.
- Sweet Rocket**; white mixed.
- Thunbergia** (*Black Eyed Susan*); mixed shades.
- Tritoma** (*Red Hot Poker*); brilliant red blossoms.
- Viola Jersey Gem**; apricot, yellow (25c), mixed 10c).
- Violet**; beautiful blue.
- Valeriana**; red and mixed colors.

Other Varieties of Annuals

- Aster**, American Giant Branching; mixed colors, double flowers, long stems.
- Aster**, Heart of France; red, 2 feet tall, good stems.
- Aster**, Early Wonder; white, light blue, dark blue, rose, crimson, mixed.
- Aster Mum**; like Chrysanthemum, white, rose, lavender, mixed.
- African Daisy** (*Arctotis*); red and orange shades, 1 foot tall.
- African Lilac Daisy** (*Arctotis Grandis*); grows 3 feet tall.
- Acroclinium** (*Everlasting Straw Flower*); double mixed.
- Balloon Vine** (*Love in a Puff*); fine climber, white blossoms, bears pods.
- Balsam** (*Lady Slipper*); double blossoms, pink, scarlet and mixed. 2 ft.
- Blue Lace Flower** (*Oidieus*); blue, grows 3 feet tall.
- Browallia** (*Amethyst*); Excellent for window boxes. Mixed colors.
- Brachycome** (*Swan River Daisy*); mixed colors.
- Bartonia** (*Blazing Star*); beautiful golden yellow, 3 feet.
- Canary Bird Vine**; climber with lovely yellow blossoms.

Cardinal Climber; strong rapid climber with blazing red flowers.

Cypress Vine (*Ipomoea Quamoclit*); fern-like foliage, scarlet or mixed.

Celosia Cristata (*Cockscomb*); crimson and mixed.

Celosia Plumosa (*Cockscomb, Feathery Type*); red, yellow and mixed.

Chinese Wool Flower (*Celosia Childsii*); crimson.

Cut Flower Mixture, (5c); A mixture of easy growing annuals. Assorted colors.

Daisy, African Mixed; grows 1 foot tall.

Everlasting Flowers; mixed varieties and colors.

Euphorbia (*Annual Poinsettia*).

Evening Primrose (*Biennial*); yellow shades, for rockery or border.

Four O'Clock (*Mirabilis Jalapa*); mixed colors, 2 feet.

Forget-Me-Not (*Myosotis*); Biennial:

VICTORIA—dwarf sky blue. 8 inches.

SEMPERFLORENS BLUE—blooms all summer.

ALPESTRIS—Blue and mixed colors.

STICK PIN—12 inches tall.

Gourds; large calabash, dipper (10c). Mixed (5c).

Hunnemannia (*Mexican Tulip Poppy*); yellow.

Hyacinth Bean (*Dolichos Lablab*); purple and white blooms. Climber.

Heliotrope (*Garden*); blue and mixed colors.

Humulus (*Japanese Hop*); white climber.

Helianthus (*Sunflower*); Double mixed, dwarf yellow chrysanthemum flowered.

Ice Plant; trailing for vases and rock work.

Job's Tears; produces little sprays, 12 inches.

Kochia Childsii (*Mexican Fire Bush*); green foliage turning to fiery red.

Lantana; Verbena-like clusters of flowers. 2 feet.

Linum (*Flower Flax*); Grandiflorum Rubrum, scarlet.

Lupin (*Annual*); dark blue, sky blue and mixed.

Mimulus Maschatus (*Musk Plant*); grows 6 in.

Moon Flower; white fragrant climber; night bloomer.

Mimosa (*Sensitive Plant*); small lilac blossoms.

Nicotiana (*Flowering Tobacco*); crimson and mixed. 3 feet.

Nemesia (*Nana Compacta*); blue, scarlet, orange and mixed.

Nemophillia (*Baby Blue Eyes*); blue and mixed. 6 inches.

Nigella (*Love in a Mist*); Miss Jekyll, double blue; Hispanica, blue (*Devil in a Bush*).

Portulaca (*Rose Moss*); double mixed, single mixed.

Physalis (*Chinese Lantern*); fine everlasting flowers.

Passiflora (*Passion Flower*); mixed colors.

Poppy, King Edward; single scarlet.

Poppy, Shirley; single mixed.

Poppy, Paeony Flowered; plain edged mixed.

Poppy, Tulip; deep scarlet.

Smilax (*Catchfly*); purple, white and mixed.

Statice Sinuata; blue, white, lavender, yellow, rose and mixed.

Strawbower (*Everlasting*); mixed.

Sweet Sultan (*Centaurea Moschata*).

Sweet Wivelsfield; similar to Sweet Williams. Mixed.

Wild Cucumber; rambling vine. Mixed.

WE HEARTILY RECOMMEND

3 "HOW-TO-DO-IT" Guidebooks for Northwest Gardeners!

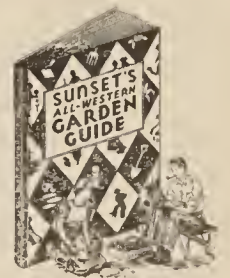
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Information for Flower Gardens

FOR CUT FLOWERS

ASTERS — Crego; mixed, lavender, pink, crimson, white, Cal. giant mixed.
 AGERATUM—blue, white.
 BLUE LACE FLOWER.
 CALENDULA — Chrysanthia, butter cup yellow, mixed, Ball's gold, Radio.
 CALLIOPSIS—single mix, double mix.
 CANDYTUFT—mixed.
 CLARKIA—mixed.
 CARNATION—double mix.
 COSMOS—single mix, double mix.
 GAILLARDIA—
 GYPSOPHILAN — white, perennial mix.
 LARKSPUR—rose, dark blue, mixed.
 MARIGOLD — tall African, dwarf French, little brownie, Guinea gold.
 NASTURTIUM—golden gleam, scarlet gleam, mixed tall, mixed dwarf.
 PHLOX—mixed.
 SCABIOSA—mixed.
 SNAPDRAGON—tall mixed, copper king, ruby.
 STOCKS—large flowering mixed.
 ZINNIA—red, yellow, purple, mixed.
 SWEET PEAS—white, salmon, rose, lavender, cerise scarlet, blue, maroon, yellow, pink, mixed.

CLIMBING VINES

BALLOON VINE—white.
 CANARY BIRD VINE—yellow.
 GOURDS—mixed.
 MORNING GLORY—tall.
 NASTURTIUM—tall mixed.
 SCARLET RUNNER BEAN—scarlet.
 SWEET PEAS—(see cut flowers).

WINDOW BOXES

AGERATUM—blue.
 CALENDULA—yellow, gold, orange, mixed.
 MIGNONETTE—grandiflora.
 PANSY—mixed colors.
 PETUNIA—mixed, rose.
 STOCKS—dwarf mixed.

ROCKERIES

CANDYTUFT—mixed.
 NASTURTIUM—tall mixed, scarlet, golden gleam.
 SWEET ALYSSUM—white.
 AGERATUM—blue, white.
 CALENDULA—orange, yellow.
 CANTERBURY BELLS—blue, white, pink.
 FORGET-ME-NOTS—blue.
 MARIGOLD—dwarf mixed.

SWEET SCENTED

AGERATUM—blue, white.
 CANDYTUFT—white, purple, pink.
 CARNATION—mixed colors.
 MIGNONETTE—white, gold.
 NASTURTIUM — scarlet, golden gleam.
 PETUNIA — blue, crimson, white, violet.
 SCABIOSA—mixed colors.
 STOCKS—mixed colors.
 SWEET ALYSSUM—white.
 SWEET PEAS—all colors.
 SWEET WILLIAMS—double mixed.
 VERBENA—scarlet and mixed.

MEDIUM TALL Varieties

24 to 36 inches

BALSAM—rose, scarlet, white.
 BLUE LACE FLOWER—lavender.
 CALLIOPSIS—yellow.
 COREOPSIS—yellow.
 CHINESE LANTERN PLANT—scarlet pods.
 CLARKIA—red, white, pink, purple.
 EVERLASTING, HELICHRYSUM—yellow, pink, rose.
 FOUR O'CLOCKS—red, white, striped.
 GAILLARDIA ANNUAL — yellow, red.
 GODETIA—rose, red.
 GYPSOPHILA—annual white.
 GYPSOPHILA—grand floral.
 KOCHIA—Mexican fire bush.
 LARKSPUR—deep blue.
 MARIGOLD, African—orange, lemon.
 MARIGOLD, French—orange, brown, striped.
 PAINTED TONGUE, Salpiglossis—mixed.
 PETUNIA—mixed colors.
 PETUNIA—Rosy Morn.
 POPPY, American Legion—Calif.
 POPPY—tulip.
 SALVIA—Splendens Zurich.
 SCABIOSA, Mourning Bride—mixed.
 SCARLET FLAX—red, Linum.
 SNAPDRAGON—yellow, white, pink, copper.
 SWEET WILLIAM—red, white, pink.
 ZINNIA, Giant Dbl.—rose, orange, scarlet.
 ZINNIA, Dahlia Fld.—rose, orange, scarlet.

TALL VARIETIES

36 inches and over

CASTOR BEAN—Rinicusul.
 COSMOS—white, pink, crimson.
 HOLLYHOCKS—scar., mar., rose, white, yellow.
 SWEET PEAS—red, pink, white, blue, lavender.

HALF DWARF Varieties

12 to 24 inches

ASTER—white, lavender, pink, crimson, purple.
 CARNATION—mixed.
 CALENDULA—yellow, mixed.
 CANTERBURY BELLS—blue, white, pink.
 CHRYSANTHEMUM, Annual Single—yellow.
 PINKS—red, pink.
 PHLOX, Drummond—rose, scarlet, violet, white, yellow.
 STOCKS—pink, scarlet, white, yellow.
 ZINNIA, Pompon—rose, orange, scarlet.

DWARF VARIETIES

Up to 12 in. For Edgings and Borders.

AGERATUM—blue.
 CALIFORNIA POPPY—yellow.
 CANDYTUFT — lilac, pink, purple, white.
 FORGET-ME-NOT—blue.
 MIGNONETTE, Sweet—white—gold.
 NASTURTIUM, Dwarf—yellow, crimson, rose, salmon.
 PANSY — black, blue, red, yellow, white.
 SWEET ALYSSUM—white.
 VERBENA—white, pink, red, blue.

Perennials and Biennials

CANTERBURY BELLS—blue, white, pink.
 CARNATION, Mixed—red, rose, salmon.
 CHINESE LANTERN PLANT—orange.
 COREOPSIS LANCEOLATA Grand—yellow.
 FORGET-ME-NOT—blue.
 GAILLARDIA, Grand—maroon, orange.
 HOLLYHOCKS—white, scarlet, maroon, yellow.
 SWEET WILLIAM, Mixed—red, white, pink.

For Semi-Shady Places

BALSAM—rose, scarlet, white.
 CLARKIA—red, white, pink, purple.
 GODETIA—rose, red, pink.
 LUPIN—blue, rose, yellow.
 MIGNONETTE, Sweet—white, gold.
 PANSY — black, blue, red, yellow, white.
 SCARLET FLAX—red.
 SWEET ALYSSUM—white.
 SWEET WILLIAM—red, white, pink.



Growing Better Lawns

It is not difficult to have a good lawn, provided good Grass Seed is used and a little attention given to ground preparation.

The preparation of the soil is much the same in all cases—occasionally unusual conditions exist which call for special treatment.

A rich soil is not necessary as humus and fertilizer which are inexpensive, can be added to ordinary soils and a perfect lawn will result. May we suggest Peat Moss and Vigoro, the only eleven element fertilizer.

After clearing off the area, decide on the level or contours desired. Proceed to level in a rough way before starting to spade or fork the ground. After this has been done, the ground should be spaded or forked over. Lawn grasses are not deep rooted but the condition of the soil will be greatly improved by a good, deep cultivation. After the area has all been worked it should be watered and left for a week or two to allow weed seeds to sprout. It may be necessary, according to the time of the year, to water frequently to get the soil moist and weed seeds to germinate.

FINAL SOIL PREPARATION

Some soils are very sandy and lack fertility and moisture content. A top soil covering consisting of good loam about 3 inches thick combined with a good dressing of peat moss will provide an ideal soil for lawns.

On the other hand, heavy adobe and clay soils will be improved by a generous quantity of peat moss when spading the ground.

We have mentioned that the roots of grasses are not deep and for this reason we recommend that after the ground has been worked over and weed seeds sprouted a second forking over be done. Before doing this, however, a good dusting of Bone Meal should be applied to the soil and also a good dressing of humus (Peat Moss) should be spread on top. If weed free Sheep Guano is available put on a layer of about an inch all over the surface.

Having done this, fork over the ground about 3 inches deep, mixing in the Guano and Bone Meal thoroughly. Then rake over the surface to remove any stones and make the surface even. Remember, a little extra time spent in obtaining an even finish will help greatly toward an attractive finished lawn. If the soil is loose after raking it would be well to roll the ground with a light roller before seeding, but do not roll while the ground is wet.

SEEDING

The ground having been prepared, the method of seeding is next to be decided. A pound of Diamond Grass Seed will sow 150 to 200 square feet according to the variety of seed used. An even distribution of seed is essential.

After the seed has been sown it should be covered lightly about $\frac{1}{8}$ to $\frac{1}{4}$ inch in depth. This is best done by what is called "tucking" with a rake. Instead of using the rake with the usual raking motion forth and back, employ a light chopping action with only a very slight pull towards you. All of the seed will not be covered but sufficient will. After this, roll the area lightly. After rolling sprinkle the lawn well with a fine hose nozzle. Do not let the ground dry out but sprinkle a little every day. In the heat of summer if a lawn is being put in it is a good plan to cover the ground after seeding with some Peat Moss or Pulverized Sheep Guano.

EARLY CARE OF LAWN

When the young grass is about 2 inches high it should be mowed. Early mowing makes the plants spread out and fill up the areas between the seedlings.

Early weeding should also be done as soon as possible. The sooner the weeds are out the quicker the grass will fill in. There is no weed seed in high quality grass seed. A good lawn will require cutting twice a week. Remember, it is easier work to cut the lawn while the grass is short and will take half the time and effort, and it is better for the lawn.

After the lawn is well established it is advisable to use a grass catcher on your lawn mower or rake well after cutting with a bamboo rake.

RENOVATING YOUR LAWN

It isn't one bit too early to make plans for the spring renovation of your lawn. If the seed is to be sown on honey-combed ground, late February or March is a good time, especially after a light snow, for as the snow thaws, the seeds settle into the ground, giving you a good, even job of seeding.

Lawns should be raked thoroughly as soon as the ground thaws, as this serves to scarify the surface soil, remove leaves, dead grass and any other debris that may have accumulated during winter.

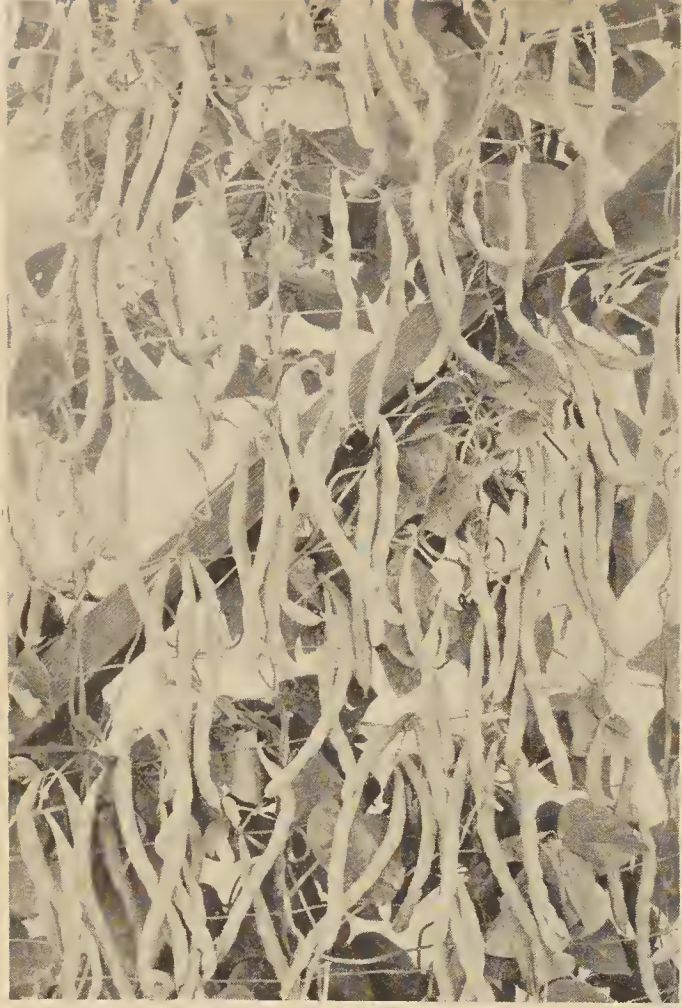
Next apply a good grass seed. Experiments have proven this, even if the ground is still frozen, for as the grass starts growing, the food is available, thereby giving it an extra stimulant before weeds begin later in the spring. Fertilizer added while the weather is cool prevents the danger of burning even though it is not washed or brushed in. The loss from this is practically nil. Unless seeding was done before, it should follow the fertilizer application. Rake it in lightly or cover it with some weed-free soil applied as a top dressing. A coating of about $\frac{1}{4}$ -inch will be beneficial on the seed as well as to established plants.

The right way to maintain turf is to seed and feed regularly, maintaining a proper balance between treatments. Seed should be used to replace the dead plants and cover bare areas, while food is needed to nourish the live plants. *Regular feeding is the most important factor in weed control, as it makes sturdy and aggressive grass plants, thus crowding out the weed growth.*

Spring rolling is important. A heavy roller is not required as the purpose is to firm grass crowns and roots into the soil. It is a mistake to try to level a lawn by rolling for if the roller is heavy enough to accomplish that, it will pack the soil causing it to bake during the summer. Sandy soil can stand heavier rolling than clay soils. It is best to roll after seeding, but the time element is most important. Usually there are a few days in spring when a lawn is dry enough to be rolled without packing the soil and yet sufficiently moist so the rolling does some good. A lawn should be rolled, even if it is necessary to roll again after seeding. An average roller weighing from 175 to 225 pounds of weight for each foot in length of the roller is considered proper for ideal results.

MOSS AND WEEDS

The presence of moss is an indication of inadequate drainage or soil impoverishment. The most effective cure is the application of Sulphate of Ammonia or Vigoro about three times during the season, raking the lawn well before each application. **DO NOT USE LIME.** *Late experiments have proven beyond a doubt that lime will not check the growth of moss, some even showing that it has encouraged its growth.*



KENTUCKY WONDER BEANS

Artichokes

Artichokes originally came from the Southern Mediterranean. It is primarily a winter vegetable and is produced in certain parts of California where the areas are frost free in winter and cool and foggy in summer.

In the producing areas suckers are used in place of seed so as to insure winter production of heads. Although the plant is a Perennial, without the peculiar climatic conditions the production of artichokes is not advisable. They may however, be grown in many frosty areas if the proper precautions are taken.

Seed may be sown at any time except during the hottest weather when all seed beds require special care. Soil should be a free moist loam and seed should be planted an inch deep. Transplant when six inches high in rows four feet apart each way. Save offsets from best plants for new supply as artichokes never come true to seed. When transplanting seedlings reject those with spindly leaves. The best edible variety is **Green Globe. Packet, 5c; oz., 75c, postpaid.**

Jerusalem Artichokes are adapted to nearly all sections west of the Cascade Mountains and the irrigated sections east of the Cascades. Used most extensively as stock feed for hogs, cattle, sheep and horses. For best results they should be fed with grain or legume hay, or both. This type of Artichoke requires the same soil and cultural methods as potatoes. 500 to 800 cut tubers are required to plant an acre. **10 lbs., \$1.00, postpaid.**

Asparagus

The young, tender shoots of asparagus have been used as a vegetable for over two thousand years. It can be grown in practically every part of the United States except in areas of extreme heat.

Asparagus is the most permanent of all vegetable crops, because of this it is obvious that the home gardener should plan to place it in a separate bed that can stand for years. No soil is too rich for asparagus, it will grow in any ordinary good garden soil but will not produce tender stalks without liberal supply of commercial fertilizer and plenty of moisture.

For the home gardener it is usually too troublesome to start asparagus from seed, for a moderate price you can purchase dormant one-year crowns or roots, thus hastening ultimate production for several years. It takes 60 to 70 roots for 100 foot row. Rows should be 4 to 5 feet apart.

If planting from seed, it is best to drill thinly in rows 15 inches apart during March or early April, thin out to two inches apart the strong plants. Transplant during February, setting the roots 1 foot apart in rows 4 feet apart. The rows should be 10 to 12 inches deep and running north and south, getting the sun on both sides. Cover the roots about 3 inches and as the plants grow, continue to cover until rows are filled.

Giant Washington. The genuine rust resistant strain, stalks long, rich dark green. Thick and heavy of excellent tender quality. **Packets, 5c; oz., 15c, postpaid.**

Mary Washington. A special selection of Giant Washington. Somewhat earlier and larger but equally resistant to rust. **Packets, 5c; oz., 15c, postpaid.**

Other Varieties. Argenteul and Palmetto. **Packets, 5c; oz., 15c, postpaid.**

Beans

The Bean is a native of the far east and has been cultivated from the earliest times. No doubt the bean is used more generally than any other vegetable both for its delicious edible green pod and the nutritious seed.

Beans are classified into two groups. The Dwarf or Bush variety and the Pole or Climbing type. These two groups are again divided into two distinct types. The Green Podded varieties and the Wax or Yellow Podded varieties.

Nearly all the bush varieties are 10 to 12 days earlier than the pole, which makes them a favorite among the home and market gardeners.

We offer a great many different varieties, however, the consensus of expert opinion indicates that the following varieties are most generally grown:

Greenpod Bush Type—Burpee Stringless Greenpod, Stringless Refugee, Stringless Black Valentine.

Greenpod Pole Type—Kentucky Wonder Greenpod, Oregon Giant Greenpod.

Wax or Yellowpod Bush—Golden Wax, Davis Wax, Pencilpod Black Wax.

Wax or Yellowpod Pole—Kentucky Wonder Wax.

Beans

The Lima Beans are generally used as dry beans. Burpee Bush Lima being the favorite bush variety while Oregon Pole Lima the favorite pole type.

Beans will not stand frost and should not be planted until two weeks after the last killing frost. It takes about a pound of seed for a row 100 feet and should be planted in hills with approximately 3 or 4 seed to the hill. For the most tender and delicious beans they should be picked when about two-thirds grown.

For a succession crop plant every ten days or two weeks until about the first of August. Seed sown after this time will probably be caught by early frost. Bush varieties mature from 45 to 70 days depending on the heat, pole varieties take 75 to 80 days.

Cultivate frequently but never do this in the early morning or just after a rain. All evidence points to the foliage of the bean as dangerously likely to spread disease if implements or clothing brush past it while it is wet. Keep this in mind also when picking the crop.

GREENPOD POLE VARIETIES

Oregon Giant Greenpod. Keeps producing until killed by frost. Large, fleshy pods, 10 to 12 inches in length, stringless, light greenish yellow splashed with red.

Packet, 10c; ½ pound, 20c; 1 pound, 35c

Kentucky Wonder. Pods are very fleshy, saddle-backed, fine grained and stringless. Early prolific, vigorous climber so stout poles are needed. Average 8 to 10 inches in length and are light green in color.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Tall or London Horticulture, White Creaseback or Blue Lake, Lazy Wife, Dutch Case Knife.

WAX POD POLE VARIETIES

Kentucky Wonder Wax. Very early. Starts bearing when scarcely higher than a bush bean and continues until frost. Pods are fleshy, long, crimped, creamy yellow and practically stringless.

Packet, 10c; ½ pound, 20c; pound, 30c

Golden Cluster Wax. Long tender pods. Brilliant yellow in color and fairly early. Bears prolifically during warm weather.

Packet, 10c; ½ pound, 20c; pound, 30c

LIMA BEANS

Oregon Pole Lima. Proven over many years to be well adapted to our cool Northwest climate. Strong, vigorous grower, bearing continuously until frost. Pods best when turning yellow.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Burpee Bush Lima, Henderson Bush, Fordhook Bush.

PROTECTION



Always use Naphthalene Flakes when planting Beets, Radishes, Carrots and other root crops.

This will insure your crop against damage by soil pests such as Wire Worms, Maggots and Cut Worms.

1 pound 15c at any Seed Store

GREENPOD BUSH VARIETIES

Stringless Greenpod. By far the best of this type. Very early and heavy producer. Pods 5 to 6 inches long, round and exceedingly fleshy. Absolutely stringless and tastiest of all beans.

Packet, 10c; ½ pound, 20c; pound, 30c

Stringless Black Valentine. Pods very fleshy, round and saddle back. Produce large crops. Always tender. Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Dwarf Horticultural or Cranberry, Stringless Refugee, Bountiful, Canadian Wonder, Red Valentine, Tendergreen, Broad Windsor, Lady Washington and Little Navy.

WAX POD BUSH VARIETIES

Improved Golden Wax. Vigorous and highly productive. Reaches table condition in 50 days. Pods are deep golden, about 5 inches in length, broad, oval and stringless.

Packet, 10c; ½ pound, 20c; pound, 30c

Davis Wax. Pods are long, rust resistant and very tender. The dry, white, kidney-shaped beans are excellent for baking.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Stringless Wax, Pencil Pod Black Wax, Brittle Wax, Prolific Black Wax, Round Pod Kidney Wax and Wardwell's Kidney Wax.

Beets are one of the easiest of vegetables to grow, doing well in almost every type of garden soil except those too rocky or hard to allow proper root development. A rich sandy loam easily worked is ideal.

Of the many on the market the best varieties of beets for the ordinary garden are Detroit Dark Red, Market Gardener, Crosby's Egyptian and Early Wonder. Early Wonder is one of the quickest from seeding to harvest averaging in good soil and favorable climate about 42 days. The other varieties take from 45 to 50 days.



DETROIT DARK RED BEETS

Beets

Early Blood Turnip. An improved variety over the blood turnip Beet. Top large, roots dark red and nearly round; flesh deep red with lighter zoning; sweet, crisp and tender. We recommend these beets for summer and fall use.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., \$1.00

Extra Early Egyptian. One of the best for forcing. Tops small, roots dark red, rounded top, flat on bottom, with very small tap root. Flesh sweet and tender.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., \$1.00

Other Varieties. Crosby Egyptian, Early Wonder, Early Eclipse. Pkt., 5c; oz., 15c; ¼ lb., 35c; 1 lb., \$1

SUGAR BEET

Sugar beet seed should be planted in early spring in rows 2½ feet apart, cultivate frequently. When plants are about 3 inches high begin thinning and continue at intervals until they are 10 inches apart. The best variety of sugar beets is the Klein Wanzleben. This variety is also used for stock. The White French or Filmore Improved Sugar is most generally grown for stock as it contains a heavy sugar yield.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

MANGEL WURZEL

Generally known as stock beet, highly recommended for their high feeding value.

They require the same soil conditions as beets.

Should be sown at the rate of 5 to 6 pounds per acre and thin to 10 inches apart in the row.

Mangels should be planted early in the spring in rows 2½ feet apart. The seed should be 1 inch apart in the rows and covered by 1½ inches of soil firmly pressed down. When plants are three inches high begin to thin until roots are 10 inches apart. One ounce of seed plants about 100 feet and 5 pounds to the acre.

P. S. Co. Heavy Cropper. One of the largest yellow Mangels. Easily pulled as it grows two-thirds above the ground. We recommend this variety because of its outstanding quality.

Pkt., 5c; oz., 10c; ¼ lb., 25c; 1 lb., 60c

Half Sugar Mangel. Double the yield of Sugar Beets. Roots large, smooth, cream white with few rootlets. Tops medium size.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

Danish Sludstrup. Roots long, reddish yellow, good yielder growing well above the ground.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

Other Varieties of Mangels. *Yellow Giant Intermediate* or *Gate Post*—Flesh white, grows half above the ground. *Golden Tankard*—Tankard shaped, flesh yellow zoned white. *Red Eckendorf*—Thick cylindrical, blunt, grows mostly above ground. *Yellow Eckendorf*—Same as Red Eckendorf aside from color. *Mammoth Long Red*—Roots large, slightly tapering, color light red, flesh white with rose tinge.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

If you are to cultivate with a hoe or wheel hoe the rows should be 12 inches apart. Make the drills deep enough to allow the seed to be covered with an inch of soil. It is always a good method to sow beet seeds thicker than the final stand is to be and then thin out the plants enough to allow proper root development. Plant about 10 to a foot of row or about 2 ounces to a 100 foot row. It is advisable to use *crude naphthalene flakes* in the rows at the time of planting seed for protection against soil pests.

Cultivate frequently and deeply at first being careful not to disturb the young seedlings, however. When the plants get to be 4 inches high you must decide whether you finally want a great many with fairly small roots or fewer and larger ones. Thin to 2 inches apart if you want small roots and 5½ inches apart for the larger ones.

Beets are rich feeders and the soil should be correspondingly rich especially if quick growth is to be secured and it should be, slow growth means tough roots while quick growth means juicy and tender ones. A commercial fertilizer is advised for best results.

P. S. Co. Market Gardener. Extra early and remarkable for its fine quality and rapid growth. Tops small, roots deep red, globe-shaped, flesh dark red, fine grained and tender. It is preferred by market gardeners because it matures evenly, stands long and does not split.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., \$1.00

Detroit Dark Red. Due to its uniformity in size and smooth handsome appearance it is very popular with canners as well as home gardeners. Roots are deep red, globe-shaped, with small tap root. This variety is entirely free of white rings and retains its tasty flavor after it grows to full size.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., \$1.00

Brussels Sprouts

Brussels Sprouts are primarily a fall and winter vegetable. The plant will not mature properly in intense heat and dryness.

The plant is closely related to the cabbage and Brussels Sprouts in their early stages treated exactly like a crop of Late Cabbage. Seed sown in the seed bed out of doors in late May should be ready for transplanting to their permanent place in the garden the latter part of July. They should then be somewhat leggy plants 5 to 7 inches high.

Pinch off a few of the leaves and set out the plants about 18 inches apart in rows that are two feet apart. They should have a rich soil but most ordinary garden soil will grow good sprouts if the plants are top-dressed about two weeks after setting out with nitrate of soda at the rate of 1 pound per hundred feet of row.

Cultivate frequently especially after rains. Sprouts begin forming at the leaf bases of the lower leaves first. To stimulate their production it is a good plan to break off most of the lower leaves of the plants beginning about October 1st or when the buds develop. This also forces more food into the forming sprouts, the lowest of which should be picked first.

The best variety for the Northwest is the **Dwarf Improved Brussels Sprouts. Pkt., 5c; oz., 25c.**

Broccoli

In our write-up for Broccoli we are featuring the Italian variety because we believe it to be the best type for Northwest soil and weather conditions. Also, we feel that very few people know of this variety or have actually eaten it. If you come under one of these classifications we strongly urge you to plant some in your garden this spring.

Italian Broccoli is a branching herb about 2 feet high. In summer all of the lateral branches and the circle ones end in a small formed green more or less open head. This, which should be cut before it actually flowers, is cooked like Cauliflower or Spinach and is very delicious and rich in the vitamins.

The plant prefers coolness and moisture rather than heat and dryness. Unless you are in a particularly favorable place, that is along the sea coast, Italian Broccoli is best treated as a two season crop, first it is started in the hotbed or greenhouse in February or March and transplanted in the open after



DANISH BALL HEAD CABBAGE

frost. Second crop is sown in the seed bed in June or July and transplanted to the garden a month or six weeks later. The later crop can be harvested through the cool autumn months.

When the seedlings that are grown in flats are ready to put out in the garden, they should be set 2 feet apart in rows which are themselves 2 feet apart. A single row of 50 plants is ample for a family of five. The plants do well in any ordinary garden soil but it should be seasonably moist. They are moderately rich feeders and commercial fertilizer should be applied before plants are put out. The bed should be kept free of weeds and well pulverized.

Packets, 5c; oz., 90c

Saint Valentine Broccoli is probably better known to most gardeners. This is very similar to Cauliflower and should be planted with the same cultural directions. In this type we also offer Early Large White French Broccoli.

Packets, 5c; oz., 90c

Cabbage

Cabbage will not stand extreme heat or dryness and will grow well only where there is some moisture and coolness. Most good garden soil will produce satisfactory cabbage if it is properly enriched. Commercially it is grown on soil ranging from sandy loam to very heavy clay or even mulch. Perhaps what is more important than texture is soil moisture, this must be adequate and conserved by constant cultivation. Most important of all is fertility, no crop repays so richly the expenditure in fertilizer as cabbage. It is most advisable to use a commercial fertilizer that could be applied before planting, at the rate of 11 pounds to 100 foot row. You will also find that it will pay to top dress about three weeks after the plants are set out with Nitrate of Soda at the rate of 1¼ pounds to 100 foot row. The



DANVERS HALF LONG CARROTS

Glory of Enkhuizen. Heads large, round, solid with few outer leaves. Excellent kraut cabbage. **Packet, 5c; oz., 25c.**

LATE OR WINTER VARIETIES

Packet, 5c; oz., 25c

Danish Ball Head. Most widely used type of late cabbage. Heads deep, round with hard, compact interior. Stubby with short stems.

Late Flat Dutch. Large, flat, solid heads. 6½ to 7 inches deep.

Other Varieties. Danish Round Head, Penn State Ball Head, Red Rock (red cabbage), Late Savoy, Wong Bock and Chinese Petsai—both Chinese cabbage.

Carrots

Carrot culture is very simple, the ordinary procedure is to sow the seed rather thickly in drills about ½ to ¾ of an inch deep the rows being 12 to 24 inches apart, depending on hand or machine cultivation. After the plants

are up about 5 inches they should be thinned from three to four inches apart in the row. If the soil is rich there will be no trouble about root development. Young, tender, quick growing carrots are better flavored than old or slow growing ones which are fit only for stock feed. If the soil is not rich apply a good complete commercial fertilizer at the rate of 6 pounds per one hundred feet of row. It takes about 1 ounce of seed for a row of this length.

In order to have tender juicy carrots all season long it is advisable to make small sowings at regular two-week intervals up to the middle of July. Later sowings may not mature before the early frosts.

Carrots, like all root crops should be protected against soil insects such as maggots, worms and wire worms. This is best controlled by the use of Crude Naphthalene flakes. Sprinkle these flakes in the rows at the time of planting seed.

P. S. Co.'s New Coreless. Larger than all other varieties. Crisp, solid, and uniform in size. Truly the outstanding carrot for tasty, crisp vegetable salads during the hot summer months. A genuine stump-rooted type. Holds its color and cooks very quickly. **Packets, 5c; oz., 15c; ¼ lb., 35c.**

Danvers Half Long. Grown mainly for its productiveness and adaptability to all classes of soil. A fine quality carrot of uniform size and shape. Sweet, crisp, tasty and tender deep orange flesh. Exceptionally fine for "vegetable stew".

Packets, 5c; oz., 15c; ¼ lb., 35c

Chantenay (Half Long). Well adapted for home gardens. Requires little cultivation and care. Ideal for lazy gardeners. Medium size tops, small necks, slightly tapering roots, stump-rooted and smooth. Deep orange flesh. **Pkts., 5c; oz., 15c; ¼ lb., 35c**

Other Varieties. Improved Long Orange, Ox-heart, Early Scarlet Horn, Red Cored Chantenay, Early Scarlet Horn, French Forcing, Imperator, Oregon Chantenay. **Pkts., 5c; oz., 15c; ¼ lb., 35c**

STOCK CARROTS

Portland Seed Co.'s Yellow Giant. Especially adapted to wet, heavy soils. Half long roots, broad

Nitrate of Soda application is necessary only for the early varieties.

Sow the seed in fine soil in flats during February or March. Do not make the soil too rich as it is likely to make the seedlings grow too fast and become lanky. Make small drills about ½ inch deep and 2 to 3 inches apart and put 6 to 8 seeds in each drill. Water often and keep an even temperature of 50 to 60 degrees.

When seedlings are 3 to 4 inches high replant further apart in flats or boxes. This insures stocky instead of spindling plants, and makes them a month or six weeks earlier than if the plants were set out. Cabbage is set at different intervals, depending upon variety—early varieties should be set about 14 inches apart in rows 28 inches apart. Late season varieties should be set 24 inches apart in rows 36 inches apart. If planted much closer they would be crowding and result in small heads.

Early types can be set out as soon as there is no danger of hard frosts. Late types, should, over most of the northern states, be placed by August 1st. It takes from 40 to 50 plants for a row 100 feet long.

Cabbages are divided into three groups—Early, Midseason and Late or Winter varieties.

EARLY VARIETIES

Early Jersey Wakefield. Small compact conical heads, plants small short stem.

Packet, 5c; oz., 25c

Copenhagen Market. Heads small, round, solid. Plants compact with short stems.

Packet, 5c; oz., 25c

Golden Acre. Earlier than Copenhagen Market. Heads are small, round and solid.

Packet, 5c; oz., 25c

Charleston Wakefield. Producing larger heads than Early Jersey Wakefield but is a week later in maturing. Heavy yielder of fine quality.

Packet, 5c; oz., 25c

MIDSEASON VARIETIES

Stein's Dwarf Flat Dutch. Heads globular, solid. Plants are dwarf with short stems.

Packet, 5c; oz., 25c

shoulder, growing half out of the ground. Bright yellow flesh. Producing a heavy crop that is most excellent for dairy cows. **Packet, 5c; oz., 15c; ¼ lb. 35c.**

Large White Belgian. One of the oldest and best known stock carrots. Roots 12 inches in length, producing a heavy yield of marvelous quality carrots.

Packet, 5c; oz., 15c; ¼ lb. 35c

Mastodon. Improved short white flesh, with smooth roots. Very heavy at shoulders, tapering. A heavy producing field carrot. **Packet, 5c; oz., 15c; ¼ lb., 35c.**

Cauliflower

Cauliflower is more difficult to grow than any other plant in the cabbage tribe, like most of them it will not stand heat and drought which limits its culture to areas free of these conditions. It is best grown in fairly cool climates where there is plenty of moisture. It will not, however, stand as much frost as cabbage or Brussels Sprouts and in very protracted warm weather it will not head. Like other members of the Cabbage family Cauliflower is divided into two groups, early varieties and the late varieties.

Soil and fertilizer conditions are the same as cabbage. It is advisable to use a good commercial fertilizer and to cultivate at regular intervals.

For quicker and better results it is advisable to start cauliflower in flats and later transplant when the young plants are about four or five inches tall. The plants should be set about two feet apart in rows three feet apart. This will allow approximately 50 head of Cauliflower to a 100 foot row. This should be more than ample for a family of five.

Solid white heads may be produced by tying the outer leaves over the center of the plant as soon as the first button-like swelling appears. Use string, tape or raffia for tying. Do not pull tight enough to injure outer leaves.

Portland Seed Co.'s Mt. Hood Snowball. One of the best early varieties that we highly recommend for early and late planting. Its pure white, fine quality heads of medium uniform size are exceedingly tasty. Popular with home gardeners as well as market gardeners. **Packet, 5c; oz., \$2.00.**

Danish Giant. Outstanding because of its ability to yield heavily in dry weather. Its large, solid white heads mature very early if forced indoors during early growth. **Packet, 5c; oz., \$1.50.**

Early Snowball. Adapted very well to forcing as well as outdoor planting. Plants are compact, producing medium to large, round heads that are pure white when blanched. **Packet, 5c; oz., \$1.75**

Other Varieties. Large Algiers, Autumn Giant. **Packet, 5c; oz., \$1.25**

Celery

Successful celery culture is based on the right climate and the right soil. As to the first the plant requires coolness as well as sufficient moisture.



MT. HOOD SNOW BALL CAULIFLOWER

No garden crop grown is such a rich feeder as celery. The soil must have depth and mellowness and an abundant supply of moisture. It is impossible to grow celery in hard or sun-baked soil. It is advisable to prepare the seed bed with a good commercial fertilizer and peat moss using about 6 pounds per 100 foot row. This should all be done about three weeks before the plants are set in the garden.

In growing celery from seed it is advisable to start the seed in flats and later transplant when the small plants are approximately 5 inches tall.

Golden Self Blanching. Indeed, one of the best early spring varieties for Northwest gardens. The long, crisp stalks mature to a beautiful golden yellow, which are easily blanched to a creamy white.

Packet, 5c; oz., 50c

Golden Plume. Superior quality, vigorous growing. A favorite with home gardeners. Semi-dwarf in habit. Fine flavored stalks that are brittle, stringless and blanch quickly. **Packets, 5c; oz. 50c**

Winter Queen. Matures in the winter and spring. Very compact growth, with large heart. Stalks blanch to cream white. Ribs are solid, crisp and free from strings. **Packets, 5c; oz., 25c.**

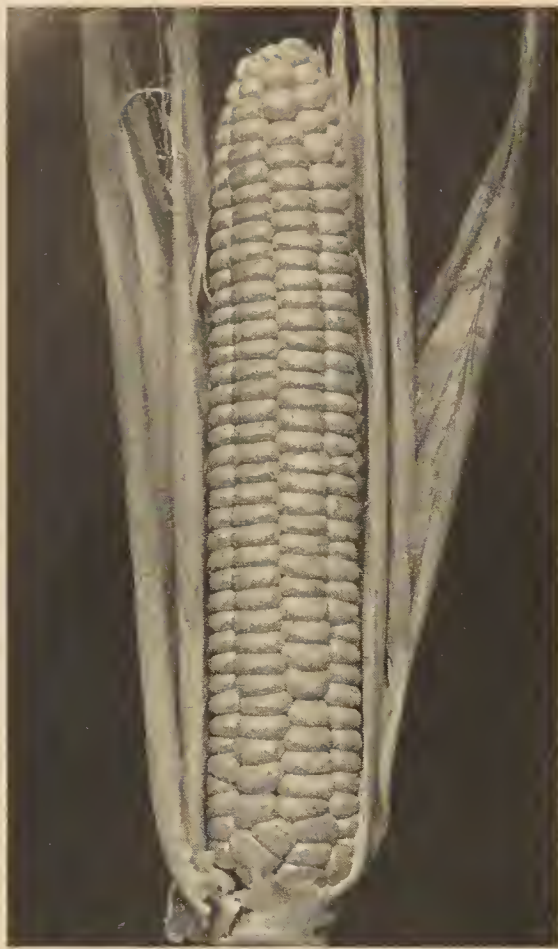
White Plume. The very earliest known variety. Stalks are exceptionally crisp and tender with inner leaves and tasty white heart. **Packets, 5c; oz., 25c**

Chicory

Witloof. This variety has become exceeding popular for winter salads. It forms a delicious dish when served like Endive or Cos lettuce with French dressing. The leaves and stems blanch easily. Seed should be sown one inch deep during May or June and spaced about 18 inches apart.

Packets, 5c; oz., 15c

Large Rooted. The roots of this plant are very popular as a coffee substitute. The young tender



GOLDEN BANTAM CORN

leaves may be used for salad or cooked for greens. Sow quite thinly in shallow drills in the spring. When well started, thin to stand 2 to 3 inches apart in the row. **Packet, 5c; oz., 15c, postpaid.**

Chives

The famous Schnittlauch—highly prized for flavor. The seed of this is not easily germinated and it will be necessary, therefore, to plant a fairly good quantity of the seed if many plants are desired.

Packet, 5c; oz., \$1.00, postpaid

Corn

Corn is truly a native of this country, developed before the new world was discovered. It can be raised with some success in every state in the union, however, for best results it requires a growing season of seventy to eighty days and with plenty of summer heat.

Any good garden soil will grow corn but it will mature quicker and be more tender if a good commercial fertilizer is used at the rate of about 11 pounds to a 100 foot row.

Generally speaking, it is better to plant the early varieties in drills and the later varieties, of course, in hills, so spaced that cultivation may be done both ways without disturbing the plants. If your garden is of the weedy sort it is better to plant all varieties in hills because it is thus possible to control weeds easier when plants are in long rows.

For the early types make the drills 2 to 2½ feet apart and 1½ inches deep. For growing in rows put a seed every 3 inches in a drill with the expectation of thinning to 6-inch intervals as soon as possible. The thinned plants cannot be transplanted with any success. **Packet, 10c; ½ lb., 20c; 1 lb., 30c, postpaid.**

YELLOW VARIETY

Golden Bantam. This variety of corn is second to none for tender, sweet and juicy ears. Although not as early as some types, its exceptionally fine quality makes it well worth waiting for. Stalks about 5 feet tall. Eight straight rows of kernels to the cob.

Improved Golden Bantam. An improved strain over the old type Golden Bantam, however, we still recommend the old fashioned variety for Northwest conditions. This newer strain has ten rows of kernels to the cob.

Golden West. A very fine early variety. Much the same flavor and tenderness as Golden Bantam and exceedingly popular with market gardeners. Ten to twelve rows to the cob.

Early Sunshine. One of the early varieties of sweet corn. Matures 3 or 4 days earlier than the majority of others. Taller and more vigorous with 12 rows to the ear.

Other Varieties. Golden Giant, Golden Evergreen, Spanish Gold.

WHITE VARIETY

Stowell's Evergreen. Remarkable for remaining in a fresh condition for a long period. Plants 7 to 7½ feet tall. Ears 8 inches long, 2¼ to 2½ inches thick; 14 to 20 rows to the cob. The most popular white variety of sweet corn.

Oregon Evergreen. Earlier than Stowell's and just as fine and sweet. An exceptionally fine canning variety because of its uniform medium to large ears with 12 to 18 rows.

Other Varieties. Early Portland Market, Country Gentleman, Black Mexican, Early Evergreen, Early Minnesota, Howling Mob, Peep o' Day and White Cory.

FIELD CORN

We offer the following varieties: Minnesota "13", Oregon Yellow Dent, Pride of the North, Northwestern Dent, Champion White Pearl, White Flint, Wisconsin White Dent and King Philips. We will gladly quote prices on inquiry. **1 lb., 15c; 10 lbs., \$1.00**

POP CORN

Butter Crisp. The kernels of this variety pop out large and fluffy and resembles buttered pop corn because of its creamy color.

Packet, 10c; one pound, 30c

White Rice. The standard variety for many years. Kernels pop out large and snowy white. Exceedingly well flavored.

Packet, 10c; one pound, 30c

New . . .

Improved Kleckley Sweet Wilt Resistant Watermelon

Packet, 10c; ounce, 25c

Lettuce

All Lettuce—Packet, 5c; oz., 15c, postpaid

Crisp, tender lettuce, the most desirable of all salad plants. Can best be grown with the strictest attention to its moisture, soil and climatic requirements. There are many varieties and types of lettuce, however for the home gardener we can segregate them into two varieties, namely, head variety and looseleaf variety. The first is by far the most desirable but the most difficult to grow. The second is less desirable but so much easier to grow that most beginners will do well to select one of its varieties.

Lettuce can easily endure several degrees of frost especially in the seedling stage which greatly facilitates the handling in the early spring. However this popular vegetable cannot be grown in extreme heat.

Any good garden soil will grow lettuce of a sort but the most favorable soils are rich sandy loam. Some varieties like Grand Rapids do best on good heavy soils with considerable clay in them. Lettuce soils should not be acid, if they are in this condition they should be limed. However, more important than the texture of the soil is the problem of moisture. If this is not available do not attempt to grow this vegetable.

HEADING VARIETIES

Portland Seed Co.'s Crispette. Heads are large, firm, crisp and tender. Bright green, curly leaves cover the outside. Solidity of the heads is insured by the large, white main ribs of leaves which curve toward the center. Withstands hot weather far better than most varieties and exceedingly tasty.

Packets, 5c

New York or Wonderful. The best head lettuce for market gardeners. It's large, very solid, tender, crisp and sweet. Beautifully blanched to a creamy white with bright green outer leaves. A very hardy and rapid grower, also, deep rooted. **Packet, 5c.**

Hanson (Improved Hard Heading Stock). One of the very best. The heads are green on the outside and cream colored on the inside. It withstands the hot sun very well, and stays crisp for quite some time. **Packet, 5c.**

Other Varieties. Brown Dutch, New York 12, Big Boston.

LOOSE-LEAF VARIETIES

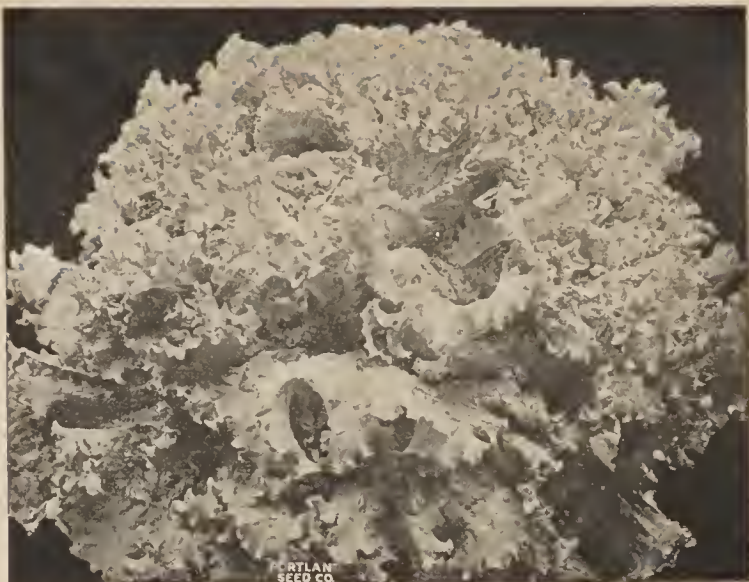
Grand Rapids. This variety is the standard hot-house lettuce for forcing. It also does exceedingly well in the open ground. The leaves are light yellowish green, slightly crimped, crisp and tender.

Packet, 5c

Simpson's Early Curled. Very fine for early planting and forcing. The leaves are finely curled and wrinkled. It is very tasty and crisp and does not wilt readily. **Packet, 5c.**

Black Seeded Simpson. The leaves form a close, compact mass. Yellowish green color and exceedingly curly. Very early cultivated. **Packets, 5c**

Other Varieties. Chicken Lettuce, Prizehead.



SIMPSON'S EARLY CURLED LETTUCE

Cucumbers

All Cucumbers—Pkt., 5c; oz., 15c, postpaid

Gardeners with limited space cannot afford to plant cucumbers, which for outdoor culture must be planted in hills at intervals of at least 4½ feet each way. The plant is a sprawling tendril-bearing vine. It requires considerable heat, a lot of moisture and a rich soil. Cucumbers are much more sensitive to frost than most vegetable crops. They can only be grown in regions that not only have plenty of heat but a frost-free period of 75 to 90 days.

Warm sandy loam especially if it has a gentle slope southward is the best soil for out-door cucumbers. No other method of fertilizing is so satisfactory as putting 2 quarts of thoroughly rotted manure under each hill or a scant wheelbarrow load is better. Broadcasting manure or fertilizer for plants spaced so far apart is merely wasteful.

See that the manure is covered sufficiently so that no seed touches it. This is easily accomplished by forming a circular hill about a foot wide and 4 inches deep over each lot of buried manure, the site of which had better be marked with a stick, if some days intervene between burying and planting time.

Planting cannot be done until warm or hot weather is assured. Plant six seeds to each hill expecting to reduce them to three as soon as germination is complete, selecting the three best plants. The seed should be planted about 1½ inches deep.

As the vines become large they will fill all of the space between the hills, so it is very important that you cultivate thoroughly while the plants are still young.

Diamond Long Green. Truly the outstanding of the large varieties. It is extremely crisp and tender, sweet, very fine for slicing. It is best for sweet pickles when matured. **Packet, 5c.**

Improved White Spine. An outstanding variety for table use. It is one of the early types and exceedingly tasty. Uniformly straight and handsome light green fruits, with a few white spines.

Packet, 5c



SUGAR ROCK MUSKMELON

All Cucumbers—Pkt., 5c; oz., 15c, postpaid

Boston Pickling or Green Prolific. Truly the finest and most popular pickling variety. The tasty, bright green fruits range from 4 to 5 inches in length and are exceedingly productive. Fine for home and market. **Packets, 5c.**

Davis Perfect. A vigorous grower. Fruits long, dark green, crisp and tender. Holds its color exceedingly well after picking, which makes it a favorite with the market gardeners. Seed cavity is small, making them very desirable for home and market uses. One of the outstanding varieties for Northwest climate.

Colorado. Cucumber Colorado won the All American 1935 Award of Merit and is destined to become one of the most popular varieties. One of its outstanding qualities is that it does not taper but is practically the same size from end to end. The fruits are dark green, 9 to 12 inches long and will yield more slicing cucumber than any other variety of approximately its size. Is highly recommended for the shipper and market garden.

Other Varieties. Short Green or Early Frame, Lemon, Japanese Climbing, Small Gherikn, Deltus, Vaughn.

Melons

The term melon, as commonly used, includes the fruits of two distinct types, namely the Muskmelon or Cantaloupe and the Watermelon. Both of these types require hot weather during the day and warm evenings in order to fully ripen the fruit. We do not recommend growing melons in the Western section of the Northwest, however, there are certain types that do fairly well in this section.

Melons thrive on a well-drained fertile soil; for early crops a light, sandy loam is preferred. Excessive alkali should be avoided. Manures or fertilizers are not generally used in the principal producing regions, the fertility being maintained by rotation and the use of green manure crops. However, where this is not available, it is advisable to use a good commercial fertilizer in a mild manner.

In growing melons it is necessary to allow a great deal of room for spreading vines. The seed may be planted as soon as the ground is warm and weather conditions permit. The hills should be approximately 6 feet apart.

WATERMELONS

All Watermelons—Pkt., 5c; oz., 15c, postpaid

Klondike. Rind is a beautiful dark green and exceptionally thin. The interior of the melon is a distinctive flesh color. Grow uniform in shape and size and ship very well.

Sweetheart. The vines are vigorous and productive. Fruits are large, oval, heavy mottled, dark and bright green, rind thin, flesh bright red, firm, sweet and tender.

Kleckley's Sweet or Monte Cristo. Distinctly a home garden melon as the dark bluish-green rind is so crisp that it breaks easily. The long, oval fruits are slightly larger near the blossom end. They weigh from 25 to 30 pounds and ripen in a little over one hundred days. For home gardeners we highly recommend this variety.

Black-Seeded Ice Cream. The melon is almost round, with a thin rind of medium green. The inside flesh is pink and exceptionally sweet and fine flavored. This variety matures early and is a fine keeper.

Other Varieties. Rattlesnake, Stone Mountain, Tom Watson, Irish Grey, Cole's Early, Black-Seeded Chilean.

MUSKMELONS

All Muskmelons—Pkt., 5c; oz., 15c, postpaid

Sugar Rock. The fruits are oval, large size, without ribbing and netted in the manner characteristic of these melons and from which they take their names. Matures in about 85 days from sowing seed, in ordinary weather conditions. The flesh is deep and thick, a beautiful orange color, with a sugary delicious flavor that is unexcelled.

Hearts of Gold. The rind is firm and densely netted. Rich, fine-grained, orange colored flesh is excellent in flavor. The seed cavity is small and in all the melon is a very fine shipper.

Rocky Ford Pollock 10-25. The fruits are uniform and heavily netted. The flesh is very sweet and tasty with a salmon-orange tint.

Other Varieties. Burrel Gem, Large Yellow Cantaloupe, Small Green Nutmeg, Osage or Miller's Cream, Early Hackensack, Hale's Best, Honey Dew Pink Flesh, Honey Dew Green Flesh, Perfecto, Speer, Banana, Persian.

CASABA MELONS

Golden Beauty. A beautiful bright golden yellow, wrinkled skin. The fruits are globular shaped and mature very early. The flesh is white and very thick. Exceedingly tender, rich, juicy and "honey sweet." **Packet, 5c; oz., 15c, postpaid.**

Onions

There are two types of onions that are most commonly grown by home gardeners—the young green or bunching onion and the mature bulb or dry onion. Green, or bunching onions, may be produced from seed, sets or multiplier bulbs. The set method is generally used among most home gardeners for the earliest green onions. However, the seed method produces a much better quality of onion and is the common method among the market gardener trade.

Dry onions may be produced from sets, but they are usually of rather poor quality and very poor keepers. We therefore recommend, wherever it is possible, growing onions from seed.

Onions require a rich, well drained soil, but any good garden soil will be satisfactory so long as it is not too stony. To be sure that the soil is rich enough, use a pound of well rotted manure to each square foot, and in addition use four or five pounds of commercial fertilizer to each 100 square feet.

The soil must be moist, as the plants will not thrive in dry sites. Onions are grown successfully in nearly all but the desert states, but they thrive best in the comparatively cool sites.

Oregon Yellow Danvers. Bulbs large, half globe, small neck, with thin brownish skin. Flesh firm, white and fine grained. Ripens early and a good keeper. **Packet, 5c; oz., 25c, postpaid.**

White Bunching. Outstanding for green onions. The young sprouts are crisp and mild, attaining a good size before the bulb forms. **Pkt., 5c; oz., 25c**

Riverside Sweet Spanish. A large globe shaped brown onion, weighing one to three pounds. Flesh mild and sweet. **Packet, 5c; oz., 25c.**

Crystal Wax Bermuda. Medium size, pure waxy white. One of the mildest sorts grown. **Packet, 5c; oz., 25c**

Other Varieties. Australian Brown, Prizetaker, Yellow Globe Danvers, Large Red Weathersfield, White Portugal, Yellow Bermuda, and Bottom Onion sets.

Kohl-Rabi

This is a minor member of the cabbage tribe, the erect stem of which is swollen just above the ground level. The swollen part, while still tender and juicy has a fine flavor liked by some, but later it becomes hard, bitter, almost woody, and useless. Kohl-Rabi is closely related to the turnip and by some considered superior.

Its culture is exactly the same as for early cabbage. Kohl-Rabi is set 8 inches apart in the row and the rows can be 18 inches apart.

Whether early or late crops are grown, it is important to secure quick growth and cut the whitish thickened stems before they become tough and woody. The plant will not stand a great deal of heat.



RIVERSIDE SWEET SPANISH

Early White Vienna. This is the best table variety and matures very early. If used for table it is the tastiest when the bulbs are 2 inches in diameter. The plants are light green with white flesh of excellent quality. **Packets, 5c; oz., 20c.**

Early Purple Vienna. Standard early sort. The plants are small, with dark green leaves spotted with purple. The exterior is purple, but flesh is white. **Packets, 5c; oz., 20c.**

Peas

The garden pea combines two features of great value. It is not only very nutritious and rich in Vitamins A, B and C but provides many advantages of clean vegetable, hence, its first great importance as a garden crop. For best results this crop is grown in a cool mild climate.

Peas do well on practically all types of garden soil. Best results may be obtained by using a good commercial fertilizer at the rate of 4 pounds per 100 foot row. Also for a better crop it is advisable to inoculate with Nitragin.

Almost no garden crop is so easy to start as peas. Peas of the low sort should be planted just as early as the ground can be worked. You need not wait for the last erratic late frost. Sowing pea seeds should be practically the first spring activity in the vegetable garden. Tall varieties are better planted about ten or fifteen days later than the lower sorts.

For the first planting of the low varieties make the drills about two inches deep, or 1 inch deep if the soil is heavy and has much clay in it. Later planting should be in drills about twice this depth but only half filled at first. As the plants grow the trench is gradually filled up. The object of this deeper drill for the later planting is to secure greater coolness and moisture for the roots and plants that will have to face greater heat.

Peas need only sufficient cultivation to keep down weeds.

EARLY VARIETIES

All Peas—Packet, 10c; ½ lb., 20c; 1 lb. 30c, postpaid.

Alaska. Height of vine 30 inches. Pods 3 inches long, blunt, straight, light green, containing 6 to 8 peas, good quality—used extensively for canning.

Gradus. Height of vine 36 inches. Pods 4 inches long, broad, plump, pointed, medium green, containing 8 to 10 sweet delicious peas.

Laxtonian. Height of vine 18 to 20 inches. Pods 4½ inches long, broad, slightly curved, pointed, deep green containing 7 to 8 large succulent peas.

American Wonder. Height of vine 14 to 16 inches. Pods 2½ to 3 inches long, blunt, straight, light green containing 6 to 7 peas.

Dwarf Gradus. Height of vine 28 inches. Pods 3½ to 4 inches long, broad, plump, pointed, medium green containing 7 to 8 large tender peas.

Little Marvel. Height of vine 18 inches. Pods 3 inches long, blunt, plump, dark green containing 7 to 8 tender peas.

Premium Gem. Height of vine 20 to 22 inches. Pods 2¾ to 3 inches long, round, straight, blunt, light green containing 6 to 7 peas of good quality.

World's Record. Height of vine 30 inches. Pods 3½ to 4 inches long, broad, plump, pointed, containing 7 to 8 large tender peas.

Thomas Laxton. Height of vine 30 to 36 inches. Pods 3½ to 3¾ inches long, plump, broad, blunt, medium green containing 7 to 8 large tender peas.

Laxton Progress. Height of vine 18 to 20 inches. Pods 4½ to 5 inches long, broad, some with curved, pointed, medium dark green containing 7 to 9 large tender peas.

LATE VARIETIES

Tall Telephone. Height of vine 40 inches. Pods 4½ to 5 inches long, broad, plump, straight, pointed, dark green containing 8 to 10 peas of highest quality.

Alderman. Height of vine, pods and color same as Tall Telephone.

Stratagem. Height of vine 26 inches. Pods 4½ inches long, 7/8-inch wide, nearly round, straight, pointed, dark green containing 8 to 10 tender, succulent peas.

Dwarf Telephone. Height of vine 22 inches. Pods 4½ inches long, broad, slightly curved, pointed, containing 8 to 10 peas.

OTHER VARIETIES OF PEAS

Blue Bantam, Hundredfold, Dukes Delight, Champion of England, Dwarf Grey Sugar, Yorkshire Hero.

Pepper, Parsley, Parsnips and Pumpkins—See Page 36.

Radishes

All Radishes—Packet, 5c; oz., 15c.

This is the easiest of all vegetables to raise and no garden is complete without at least one or two varieties.

The common Radish will germinate in four to days and if grown properly will have useful roots ready to harvest in twenty-eight to thirty days. If it takes longer than this the roots will be spongy, acid or woody, hence useless. The secret of getting crisp,

delicious radishes is quick growth; for this they need a rich mellow soil. Sow the seed about one-third of an inch deep in drills not over 8 to 12 inches apart.

All through the spring a succession should be sown every ten days. Keep in mind that an old radish is a worthless one and being harvested as soon as possible, they must be quickly grown and of course kept thoroughly cultivated. It is advisable to use crude Naphthalene flakes in the soil at the time of sowing seed. This will protect the crop from soil insects such as maggots and worms.

Early Scarlet Turnip. White Tipped. Turnip shaped roots tipped with white. Flesh white, crisp, tender and sweet. Tops small. Matures very early.

French Breakfast or Half Long. Excellent for both home and market gardening. Tops small, roots oblong and blunt. Scarlet with white bottoms; flesh white, crisp and sweet. Splendid quality.

Early Scarlet Globe. Matures very early. A bright carmine-red color. Perfect oval shape and ideal size makes this an excellent radish for market. They reach this size in about 25 or 30 days and are best when not quite full grown. Sweet, crisp and tender flesh of the highest quality.

White Icicle. A popular white radish. Roots long, clear, white, especially mild.

Other Varieties. Early Scarlet Turnip, Long Black Spanish, China Rose Winter, Crimson Giant.

Spinach

All Spinach—Packet, 5c; oz., 15c.

Spinach is a cool season annual, grown for greens. No spinach will stand extreme summer heat without "shooting" seed stalks. For this reason the seed must be sown early in the spring or late in summer to avoid the danger of the crop maturing in July or August. For spring and summer use sow as early as the ground can be worked and make successive plantings every two weeks until May 15th. The leaves will be ready for use four or five weeks after sowing. For Autumn use, sow seed about August 1st. Spinach will grow very large and can be cut from the first of September until the ground freezes.

Improved Thick Leaf. Believed by many as the finest spinach on the American market today. It is the largest-leaved spinach grown and is exceedingly crisp, tender and tasty. It grows rapidly and remains in good condition a long time, making it fine for market. The medium-green leaves are large, rounded, slightly crumpled, succulent, and tender.

New Zealand. Thrives in hot weather in any soil. Leaves comparatively broad and pointed. Will grow through the summer.

Prickly Winter. Hardest variety. Must be sown in the fall. Seeds prickly. Leaves long, pointed, thick and succulent.

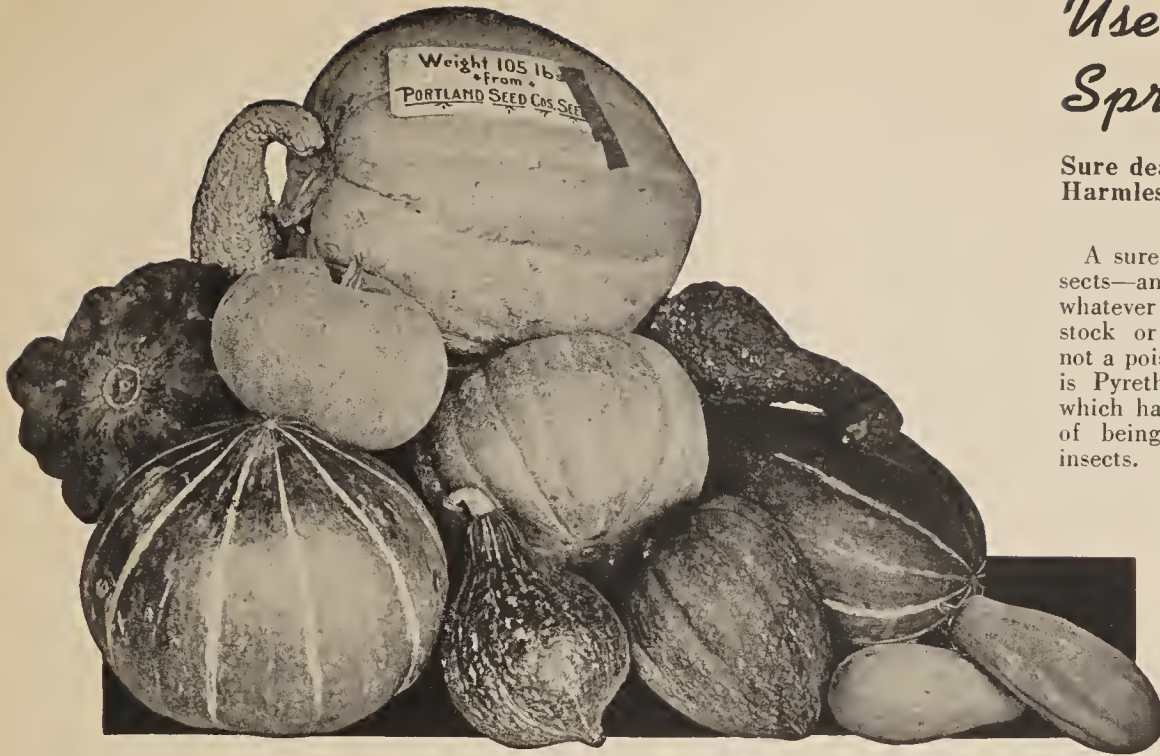
Other Varieties. Nobel Giant Leaved, King of Denmark, Long Standing.

Use Evergreen Spray

Sure death to plant insects—
Harmless to man, birds and
animals.

A sure killer of most plant insects—and yet offers no poison whatever to human beings, livestock or birds—it is positively not a poison. The active principle is Pyrethrum, or insect flowers, which has this valuable property of being deadly to nearly all insects.

1 oz. 35c; 6 oz. \$1.
16 oz. \$2; f. o. b.
Portland.



Squash

Whatever type of squash is grown, they must be treated as extremely tender annuals, especially the winter and autumn varieties, which in some northern regions will ripen their fruits uncertainly, due to lack of heat and a short growing season. There is generally, except in the coldest regions, no difficulty about raising summer squashes, but all sorts repay quick growth and plenty of heat.

If you have space and prefer to grow the vine-like forms, the hills should be at least 8x8 feet apart, but if space requirements make the bush forms imperative, and they are far easier to grow, cultivate and harvest, the hills can be about 30 inches apart each way.

It is useless to put squashes in a heavy, wet soil, for they grow too slowly in such places. It is better to select a warm sandy loam, upon which they thrive if it can be made rich enough. Being spaced so far apart, there is no use in a program of general soil enrichment for squashes, but every reason for concentrating the fertilizer under the hills. A good plan is to dig out about 2 feet of indifferent soil and fill in with a half-and-half mixture of sandy loam and well-rotted manure. Or if this is lacking, mix about 1 pound of a good complete commercial fertilizer with the soil.

For the summer squashes, unless your soil warms up very slowly, the seed should be planted directly in the hills, 4 to 5 seed to a hill, which should ultimately be thinned to 2 or 3 plants, depending upon their vigor and ravages of cut worms. It will help greatly if Naphthalene Flakes are used at the time of planting.

For the winter squashes or for any that have long, sprawling vines, it is better to start them in the hot-bed, as outlined above, if you live in a region with a short growing season. Otherwise, some of the late fruits will be caught by frost before maturity. In any

case, the vine-like ones should be watched to see that all the growth does not run to vine and leaf at the expense of fruit. This is especially likely in rich soils or in one that gets extra top-dressing of fertilizer. By keeping vines well pinched back it will develop better fruits.

All Varieties Squash—Packet, 5c; oz., 15c; ¼ lb., 35c, postpaid.

WINTER VARIETIES

Improved Hubbard Squash. Large and of warty Hubbard type. Shell dark green, hard, moderately warted. Flesh light orange, very dry and richly flavored. One of the best winter squashes.

Banana Squash. One to two feet long. Flesh firm, orange yellow. Rind smooth, greyish green color. Excellent flavor and splendid keeping qualities. **Packet, 5c.**

Golden Hubbard Squash. Same in size, shape and quality as the green Hubbard, except that it is bright red or golden color and somewhat earlier. Excellent keeper. **Packet, 5c.**

Table Queen Squash. Small, dark green, acorn shape. Flesh rich yellow, dry, richly flavored. Medium early. A good keeper. **Packet, 5c.**

Other Varieties of Winter Squashes: Boston Marrow, Mammoth Chili, Sibley or Pike's Peak and Warty Hubbard.

SUMMER VARIETIES

Cocozel or Italian Marrow. Skin dark green, becoming marbled with yellow at maturity. Flesh pale green, thick, firm and tender. Best when 5 to 6 inches long. **Packet, 5c.**

Early Summer Crookneck. Earlier and larger than ordinary crookneck. Skin yellow, thin, hard and warty. Flesh tender and of good quality.

Packet, 5c

White Bush Scallop. Early, medium size, somewhat flattened with creamy white skin. Flesh milk white. firm and richly flavored. **Packet, 5c.**



Tomatoes

All Varieties Tomatoes—Packet, 5c; oz., 35c; ¼ lb. \$1.00.

The tomato is perhaps more tender than any other garden plant in such general culture. It is blackened by the least touch of frost, and will grow well only where there is sufficient heat. However, while many home gardeners will prefer to buy potted plants at the time they should be planted out, there is little need to do this, for tomatoes are among the easiest of vegetables to raise from seed. In your calculations for the early varieties, allow 7 to 8 weeks from the time of sowing seed to the proper date in your locality for setting the plants in the garden.

The seed should be sown in fine, not too rich soil, about ¼-inch deep, either in tiny drills or broadcast as you prefer. Keep the soil moist but not wet. When the seedlings are about 2½ inches high, brick them out and replant on 2x2 inch intervals and allow them to grow until they are 4 or 5 inches high. By this time they are ready for transplanting into the open ground.

Tomatoes need constant cultivation to keep down weeds and conserve soil moisture, upon which they draw heavily. This is especially true in the early stages of the plants allowed to sprawl. Later these cannot be cultivated without injury to the tender, rather brittle stems.

Any good garden soil will grow tomatoes. Experience has shown that too much (especially nitrogenous) fertilizer or manure close to the plants makes them more likely to produce leafage than fruit. If you are prepared to pinch off the excess leaves, they may be fertilized as for any other rich feeding crop.

Bonny Best. Early, hardy and a scarlet fruit variety. Medium sized, solid, smooth and quite round. Very productive with excellent quality.

Packet, 5c

Chalk's Early Jewel. Fruits large, bright red, round, smooth, solid and almost seedless. Recommended for market and home gardeners. Packet, 5c

Break O' Day. *Wilt resistant.* Vines vigorous open growth and very productive. Fruits scarlet medium to large size true globe shape. Slightly earlier than Mariglobe, an excellent variety for the home

and market garden. Packet, 5c; ounce, 40c; ¼ pound, \$1.40. Prices postpaid.

John Baer. Brilliant round fruits, high crown, smooth and delicious flavor that is easily peeled. Excellent keeper, yields well and a good shipper.

Packets, 5c

Mariglobe. Very resistant to disease. Fruits are large, globe shaped and deep red. Excellent for slicing and canning. Packets, 5c.

Prichard. Newest to be introduced by U. S. Department of Agriculture. Strongest disease resisting tomato yet offered. No core, small seed pockets and evenly colored throughout. Packets, 5c.

Other Varieties: Dwarf Champion, Burbank, Stone, Golden Queen, Yellow Pear, Yellow Plum and Ground Cherry. Packets, 5c.

Turnips

All Varieties Turnips—Packet, 5c; oz., 15c; ¼ lb. 25c.

Turnip seed sown about the last week in July or early in August will provide a crop when they are most wanted in the late fall and winter. The plant is a biennial and if left in the ground all winter will bloom and set seed the following spring. However, we do not recommend this as the second growth plants are not hardy and many times register a crop failure.

The seeds should be sown in drills about ¾-inch deep and thickly enough so that the plants can be thinned to 5 or 6 inches apart. For hoeing or a wheel cultivator, keep the rows about 15 inches apart.

The plant does best in the loose open loam, and the product is much better if quickly grown. While it is primarily a late fall and winter vegetable very early varieties have been developed which may be sown as soon as the ground can be worked in the spring. Such can be harvested in the early summer, and should be, because if left in the ground they will go to flower and the roots are then soon useless.

Cultivate as for any other root crop, being careful not to injure young roots with tools. The plant responds to rich soil, but top-dressing with nitrate of soda should be avoided. If necessary, use any well-balanced commercial fertilizer, working it in between the rows about 5 weeks after the seed is planted. The turnip is a cool season crop and does not like hot dry regions.

Purple Top White Globe. Large, globe shaped. Purple on top, white below. Excellent quality and highly recommended for home use as well as field crop. Packet, 5c.

Purple Top Strap Leaf. An early variety. Roots medium size, flat. Purple above the ground, white below. Flesh white, firm but tender and may be used for table or stock feeding. Packet, 5c.

Golden Ball. Medium size, round and yellow. Flesh firm, hard and most excellent flavor. Keeps well and a fine table variety. Packets, 5c.

Other Varieties: Early Flat White Dutch, Early White Milan, Early Snowball, Early Purple Top Milan, Pomeranian White Globe, White Egg, Yellow Aberdeen, Cow Horn, Bortfield.

VEGETABLE SEED PLANTING CHART

KIND OF SEED	Time to Plant Outdoors	Distance for Plants		SEED REQUIRED		Ready to Use
		Bet. Rows	In the Row	Row	Acre	
ASPARAGUS.....	February to April...	5 to 6 ft.	18 to 24 in.	1 oz. to 40 ft.	2 to 3 lbs.	2nd Spring
BEANS, Bush.....	April, May and June.	2 to 3 ft.	3 to 4 in.	1 lb. to 250 ft.	90 to 100 lbs.	40 to 65 days
BEANS, Pole.....	April, May and June.	4 ft.	2½ to 3 ft.	1 lb. to 125 hills	30 to 40 lbs.	70 to 90 days
BEANS, Lima.....	May and June.....	2 to 4 ft.	10 to 36 in.	1 lb. to 80 hills	50 to 60 lbs.	90 to 130 days
BEETS, Table.....	March to July.....	14 to 20 in.	2 to 4 in.	1 oz. to 100 ft.	10 to 15 lbs.	45 to 60 days
BROCCOLI*.....	June to August.....	24 to 30 in.	14 to 18 in.	1 oz. to 1500 plants	6 to 8 oz.	120 to 150 days
BRUSSELSPOUTS*.	April to June.....	30 to 36 in.	18 to 24 in.	1 oz. to 2000 plants	6 to 7 oz.	100 to 120 days
CABBAGE, Early*....	February to April...	30 to 36 in.	16 to 24 in.	1 oz. to 2000 plants	6 to 8 oz.	90 to 110 days
CABBAGE, Late*....	May and June.....	36 to 42 in.	24 to 30 in.	1 oz. to 2000 plants	6 to 7 oz.	110 to 120 days
CARROTS.....	April to July.....	12 to 24 in.	2 to 3 in.	1 oz. to 250 ft.	3 to 4 lbs.	55 to 80 days
CAULIFLOWER*.....	March to June.....	3 to 4 ft.	24 to 30 in.	1 oz. to 1500 plants	6 to 7 oz.	95 to 110 days
CELERY*.....	April to July.....	18 to 36 in.	6 to 10 in.	1 oz. to 8000 plants	4 to 5 oz.	120 to 150 days
CHICORY.....	March to May, Sept.	16 to 20 in.	6 to 8 in.	1 oz. to 200 ft.	3 to 4 lbs.	90 to 120 days
CHIVES.....	April and May.....	12 to 18 in.	4 to 6 in.	1 oz. to 200 ft.	4 to 5 lbs.	125 to 150 days
SWEET CORN.....	April to June.....	36 to 42 in.	9 to 12 in.	1 lb. to 100 hills	12 to 15 lbs.	55 to 90 days
CRESS.....	Feb. to May, Sept...	12 to 18 in.	4 to 6 in.	1 oz. to 250 ft.	3 to 4 lbs.	45 to 60 days
CUCUMBER.....	April to July.....	4 to 6 ft.	10 to 12 in.	1 oz. to 100 hills	2 to 3 lbs.	50 to 75 days
EGG PLANT*.....	April and May.....	24 to 30 in.	18 to 24 in.	1 oz. to 1500 plants	4 to 5 oz.	125 to 140 days
ENDIVE.....	May and June.....	18 to 20 in.	10 to 12 in.	1 oz. to 300 ft.	3 to 4 lbs.	90 to 100 days
HERBS, Annual.....	March and April....	20 to 24 in.	10 to 12 in.	1 oz. to 200 to 600 ft.	3 to 10 lbs.	125 to 150 days
HERBS, Perennial....	April to June.....	20 to 24 in.	10 to 12 in.	1 oz. to 200 to 600 ft.	3 to 10 lbs.	Next Season
KALE.....	Mar. and Apr., Aug.	18 to 24 in.	12 to 18 in.	1 oz. to 2000 plants	6 to 8 oz.	55 to 60 days
KOHL RABI.....	March to May.....	16 to 24 in.	6 to 8 in.	1 oz. to 300 ft.	3 to 4 lbs.	50 to 70 days
LEEK.....	May to June.....	14 to 20 in.	4 to 6 in.	1 oz. to 150 ft.	4 to 5 lbs.	120 to 150 days
LETTUCE, Leaf.....	March to September.	12 to 18 in.	4 to 6 in.	1 oz. to 600 ft.	4 to 5 lbs.	40 to 70 days
LETTUCE, Head.....	February to August.	12 to 16 in.	12 to 14 in.	1 oz. to 3000 plants	1 to 1½ lbs.	70 to 90 days
MUSKMELON.....	April to June.....	6 to 8 ft.	4 to 6 ft.	1 oz. to 40 hills	3 to 5 lbs.	90 to 150 days
WATERMELON.....	May and June.....	8 to 12 ft.	6 to 10 ft.	1 oz. to 25 hills	4 to 6 lbs.	100 to 160 days
MUSTARD.....	March to May, Sept.	12 to 18 in.	2 to 3 in.	1 oz. to 600 ft.	4 to 5 lbs.	60 to 90 days
OKRA*.....	April and May.....	2½ to 3 ft.	18 to 24 in.	1 oz. to 250 plants	5 to 6 lbs.	70 to 90 days
ONION, Seed.....	April and May.....	12 to 18 in.	2 to 4 in.	1 oz. to 200 ft.	4 to 5 lbs.	125 to 150 days
ONION, Sets.....	October to May....	12 to 18 in.	2 to 3 in.	1 lb. to 50 ft.	2 to 3 sacks	50 to 70 days
PARSLEY.....	March to May, Sept.	18 to 24 in.	12 to 16 in.	1 oz. to 250 ft.	3 to 4 lbs.	65 to 90 days
PARSNIP.....	April to June.....	15 to 20 in.	2 to 4 in.	1 oz. to 300 ft.	4 to 6 lbs.	130 to 145 days
PEAS, Dwarf.....	Nov. & Feb. to June.	18 to 24 in.	1 to 2 in.	1 lb. to 120 ft.	150 to 175 lbs.	45 to 75 days
PEAS, Tall.....	Nov. & Feb. to June.	4 to 6 ft.	1 to 2 in.	1 lb. to 120 ft.	100 to 125 lbs.	60 to 90 days
PEPPER*.....	May and June.....	18 to 24 in.	14 to 16 in.	1 oz. to 1500 plants	3 to 4 oz.	130 to 150 days
POTATOES, Irish....	March to June.....	24 to 36 in.	14 to 18 in.	1 lb. to 15 ft.	7 to 9 sacks	90 to 150 days
PUMPKIN.....	May to July.....	8 to 12 ft.	6 to 8 ft.	1 oz. to 30 hills	4 to 5 lbs.	75 to 90 days
RADISH.....	February to Sept....	12 to 18 in.	1 to 2 in.	1 oz. to 100 ft.	8 to 10 lbs.	20 to 75 days
RHUBARB.....	March to June.....	30 to 36 in.	16 to 24 in.	1 oz. to 250 ft.	6 to 8 oz.	3rd Year
RUTABAGA.....	May and June.....	18 to 24 in.	6 to 8 in.	1 oz. to 400 ft.	2 to 3 lbs.	90 to 120 days
SALSIFY.....	March to May.....	18 to 24 in.	2 to 4 in.	1 oz. to 120 ft.	8 to 10 lbs.	120 to 150 days
SPINACH.....	Feb. to May, Sept...	12 to 18 in.	3 to 6 in.	1 oz. to 100 ft.	10 to 12 lbs.	45 to 60 days
SQUASH, Bush.....	April to June.....	3 to 4 ft.	3 to 4 ft.	1 oz. to 30 hills	4 to 6 lbs.	65 to 70 days
SQUASH, Winter.....	May to July.....	10 to 12 ft.	8 to 10 ft.	1 oz. to 15 hills	3 to 4 lbs.	120 to 140 days
SWISS CHARD.....	March to July.....	12 to 18 in.	4 to 8 in.	1 oz. to 150 ft.	6 to 8 lbs.	45 to 60 days
TOMATO*.....	April to June.....	3 to 4 ft.	2 to 3 ft.	1 oz. to 3000 plants	3 to 4 oz.	125 to 150 days
TURNIP.....	March to August....	12 to 15 in.	3 to 4 in.	1 oz. to 400 ft.	2 to 4 lbs.	45 to 90 days

* Planting dates shown for crops marked "*" are intended to be for setting plants into the garden. Seeds should be sown 40 to 60 days earlier, indoors or under glass.

Seed should be covered from three to five times its diameter. Press soil down firmly. Keep moist continuously.

The above chart gives distances between rows for hand cultivation; where horse or tractor is used the rows should be farther apart.

Now About Fertilizer



All 11 Elements No Phosphorus No Potassium



No Nitrogen No Calcium No Magnesium



No Sulphur No Iron No Boron

AS, here, and usually understood, fertilizers include the so-called artificial, or chemically prepared, commercial fertilizers, but not manure, the latter being mostly of animal origin.

A complete fertilizer should theoretically contain all the plant food that could be derived from a perfect soil. But plants use so many different chemical elements and their compounds, and so many of them are present in more than adequate amounts in all soils, that a complete fertilizer is now understood to contain the three most essential elements only—nitrogen, phosphoric acid, and potash. It is upon these three, especially nitrogen, that the fertility of most soils depends, and all commercial fertilizers contain these substances in varying ratios, depending upon the crop and the soil to which the fertilizer will be added. For the use on lawns, flower gardens and kitchen gardens we highly recommend Vigoro, for commercial use see the chart to follow.

No one today needs to buy fertilizers blindly. They are forced to contain a specified amount of available nitrogen, phosphoric acid, and potash, and their claims are checked by the chemists of the Department of Agriculture.

The uninitiated, however, can still be misled, or can buy fertilizers wastefully, by not understanding exactly what the figures on a fertilizer bag means. It is, for instance, a common thing to see a bag labeled 4-12-4, or almost any other combination of three numbers separated by hyphens. Throughout the United States such figures always mean that the first figure is the percentage of nitrogen, the second the percentage of phosphoric acid, and the third the percentage of potash, in the mixture.

Many intelligent gardeners often ask why use commercial fertilizers at all, considering that it is only since the rise of industrial chemistry that they have been available. This is true, and if manure in sufficient quantities could be found, chemical fertilizers would not be needed. But the motor age and

the passing of the horse have made animal manure rather scarce and really quite expensive when you consider the amount it takes in order to get the same results that a small amount of commercial will give.

Before coming to specific fertilizer suggestions for different crops, it will make them more intelligible to understand and the role of the constituents.

NITROGEN. The most valuable, most expensive, and soonest exhausted of all fertilizer constituents. It is necessary for leaf growth and in general, all plant growth above the ground. Large amounts produce a rank, tender growth of a dark green color. The quickest-acting and most effective source of nitrogen is nitrate of soda. It is available almost as soon as applied to the ground as it dissolves at the first rain and is immediately available. Its disadvantage is that, once applied, it is soon lost (absorbed by the crop) and consequently builds up little or no residue of nitrogen for later crops. But other sources of nitrogen will supply this deficiency.

One of them is bone meal. This ground-up bone dust dissolves much more slowly than nitrate of soda and is consequently of value in small gardens, as top dressing for pots, frames, or for feeding house plants. And because of its slow action, it is safer to use than nitrate of soda, an overdose of which can easily injure or even kill a crop. Bone meal also contains much phosphoric acid.

Other valuable sources of nitrogen are tankage and dried blood, both prepared by-products of the slaughter houses, and, like bone meal, more useful for permanent enrichment than for quick effects. Calcium nitrate, sulphate of ammonia are also valuable sources of nitrogen.

PHOSPHORIC ACID. This, mostly supplied by rock

phosphates and superphosphates, is, next to nitrogen in importance. Its especial function is the stimulation of cereal crops, but it is also absolutely necessary for most vegetable and flower crops. Many soils are deficient in phosphorus and the lack of it often slows up final crop production. Phosphoric acid causes the development of fibrous roots, increases disease resistance, and hastens maturity.

POTASH. The chief use of potash is the stimulation of root crops like beets, carrots, turnips, radishes, and parsnips. But as part of the balanced ration for perfect growth, potash must be a constituent of all fertilizer mixtures. It is used chiefly in the form of muriate of potash for vegetables, and sulphate of potash for potatoes. Wood ashes contain from 4 to 6 percent of potash.

Potash is necessary for the formation of starch and its transference to various parts of the plant. It also increases resistance to disease. All crops require potash for proper growth, but it is especially valuable for cabbage, celery, and the root crops.

While different plants need different amounts of these three substances, only a "straights" (such as nitrate of soda) are applied alone, and this where special crops are being raised in soils definitely lacking in one element. Most fertilizers contain judicious mixtures of the three, hence the common advertising of so-called "complete fertilizers." There never can be a really complete one, but long experience has shown that the following come as near being complete as one can expect.

For lawns, flowers and small vegetable gardens — Vigoro 4-12-4.

For corn and other cereals and head lettuce—3-10-7.

For berries, celery and potatoes—5-6-8.

For fruit trees and general vegetable gardens—3-10-10.

Rock Gardens

IT is correct to assume that the ideal rock garden is one capable of supporting a healthy growth of alpine and rock plants. In order to display them in an appropriate setting and to provide proper cultural conditions, in part at least, approximating those under which they grew in nature, a rock garden is necessary.

Apart from their value in providing a picturesque and natural setting, a rock garden has several distinctly utilitarian functions to perform. They help to keep the ground cool, they conduct moisture to the roots of the plants and prevent in part its loss by evaporation. As many alpine plants grow in a situation where the soil is constantly moistened during the growing season with rain or snow water, the importance of providing a cool root run is immediately obvious. Rocks serve to give shade and shelter and aid in promoting the efficient drainage which is so necessary. Also they hold up the soil making it possible to provide a variety of contours in the garden.

The forms that rock gardens take are many and varied, ranging from the many positive directions made solely for the purpose of growing a large collection of alpines and rock inhabiting plants, to the type designed purely for a landscape feature in which the plants are merely incidental decorative material. The ideal garden lies between these extremes and consists of a construction in which the rocks are arranged artistically, usually with the

same relation to what one might find in nature, and placed in such a way that a reasonably large collection of plants may be cultivated.

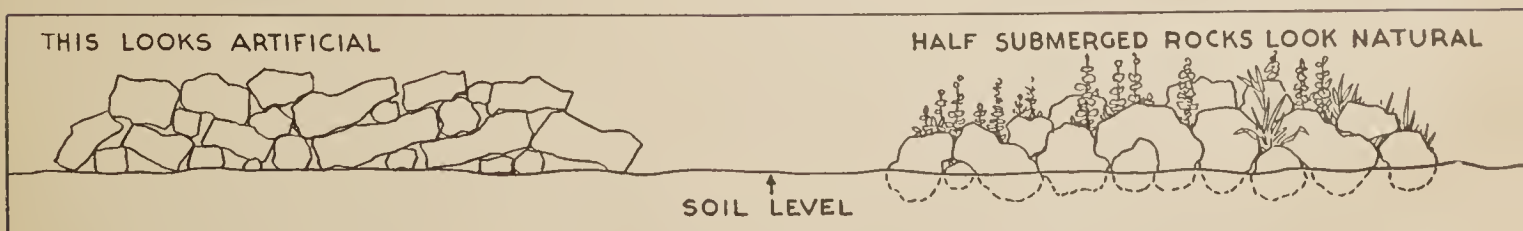
As a general rule, the site of the rock garden should be in the open, not subject to the drip of trees or to have to compete with their root systems.

Preferably the subsoil should be a porous nature permitting the rapid drainage of surplus moisture. This is true in spite of the fact that some alpines thrive in boggy situations. Where subsoil is not of this type, it is advisable to place a six-inch foundation of cinders before constructing the rockery.

Weather worn limestone of irregular shapes is perhaps the most pleasing material for construction and the easiest to work with, but weathered rocks of almost any kind can be used to advantage, provided they are angular and blocky in form with a natural color and of pleasing appearance.

Having decided on the location and knowing the kind and amount of rock available, the next step is to remove the top soil from the area. This top soil is the medium in which the rock plants will be planted, therefore should be saved. Next the subsoil should be shaped up so its contour roughly conforms with the general outline the rock garden is to assume. Its drainage is necessary, it is advisable at this time to put in the six inches of cinders.

In placing the rocks it is advisable to partly submerge the larger ones and build up from that point. This will give a more natural effect as well as provide better sites for planting alpine and rockery plants.



Parsley

Packet, 5c; oz., 10c, postpaid.

Plain. Plain leaves, flat, dark green. Used for flavoring and drying.

Turnip Rooted or Hamburg. Roots used for flavoring soups, stews, etc.

Extra Double Curled. Dark green, moss-like leaves, finely curled.

Parsnips

CULTURE

Culture same as for carrots. May planting considered best.

Hollow Crown or Long White. Long, white, smooth, tender, sugary, excellent flavor. Very hardy. Will keep through the winter without protection.

Packet, 5c; oz., 15c, postpaid.

Peppers

Continuous warm weather for best results. Seed should be started in hot beds as it is slow in germinating. Set plants in ground when about 2½ inches tall. A moderate dressing of guano, or commercial fertilizer, hoed into the soil after plants are well established, will give better results.

All varieties of Peppers: Packet, 5c; 1 oz., 60c, postpaid.

OTHER VARIETIES

Perfection Pimento.	Ruby King.
Large Bell or Bull Nose.	Chili.
Cayenne.	California Wonder.
Chinese Giant.	

Pumpkins

Pumpkins are grown much the same as melons, but are less sensitive to cold weather. They are best after the first light frosts, usually during the months of October and November. Seed should be planted during the early part of May, in hills 6 to 8 feet apart in all directions. Every garden should have a few hills of this truly American vegetable.

All varieties of pumpkins: Packet, 5c; 1 oz., 10c, postpaid.

Large Yellow or Connecticut Field. Large, round. Deep, glossy yellow. Very productive. Good keeper. Grown extensively for stock feeding.

Giant of All ("King of Mammoths"). Almost a globe in shape. Skin a rich golden yellow, flesh firm, fine grained and deep yellow, sweet flavored, very thick. Excellent quality.

Winter Luxury. The best flavored pie pumpkin grown. Excellent keeper. Medium size. Color golden russet, finely netted. Flesh deep golden, sweet, tender and very thick.

Sweet or Sugar. A productive small pumpkin. Skin orange, flesh deep yellow, fine grained. Very sweet. The famous "New England Pie Pumpkin."

SPECIAL

Bleeding Hearts. Large plants 50c each, small plants 25c each, postpaid.

Tiger Lily. Single large bulbs 15c each, \$1.50 per dozen, postpaid.

Regal Lily. Large bulbs 20c each, \$2.00 per dozen. Small bulbs 10c each, \$1.00 per dozen, postpaid.

Alpine and Perennial Plants

25c each, 6 for \$1.00. Postpaid.

*Denotes Rock or Alpine.

Aconitum Wilsonii. Resembles Blue Delphinium, 3 to 5 ft.

***Aethionema Cordifolium.** Lilac-rose flowers, bluish foliage; 8 in.

Alstromeria Aurantiaca. Orange, lily-like flowers; delicate; 2 to 3 ft.

***Alyssum Saxatile.** Yellow flowers; about 1 ft.

Anchusa Italica. Blue flowers; 4 ft.

Anemone Japonica. Assorted colors; 2 to 3 ft.

Aquilegia. Long spurred flowers; delicate colors.

***Arabis.** White or pink flowers; 6 in.

***Arenaria Grandiflora.** White flowers; small plant.

Artemisia Lactiflora. Fleecy white plumes; 6 feet.

Asters (Michaelmas Daisy). Assorted colors; tall.

***Aubretia.** Trailing; various colors.

***Bellis Perennis (English Daisy).** Bright red, shaded to white. 3 in.

Carnations. Assorted colors.

Canterbury Bells. Pink, white, blue.

***Campanula Carpatica.** Blue or white flowered.

Chrysanthemums. Assorted colors.

Coreopsis. Bright yellow, continuous bloomer border plant.

Delphinium. Dark blue, light blue.

Dianthus. Assorted colors; 15 in.

Doronicum. Large yellow daisy.

Geum. *Lady Stratheden.* Rich yellow, double flower. *Mrs. Bradshaw.* Orange-scarlet rose-like flower.

(Continued on next page)

Alpine and Perennial

Gypsophila—Paniculata. Baby breath. 3 ft.

***Helianthemums.** Assorted colors; trailing and dwarf.

***Heuchera Sanquinea.** Red, bell flowers.

Hemerocallis. Deep yellow day lily; 15 in.

Hollyhocks. Assorted colors.

***Iberis.** Improved candytuft; rose, lavender, white.

Lavandula Vera. English lavender; 3 ft.

***Linum Perenna.** Azure blue flowers; continuous bloomer.

Lychnis Chalcedonica. Resembles small Sweet William; scarlet; 2 ft.

Poppies. *Nudicaule.* Assorted colors. *Oriental.* Large orange or red.

Phlox Decussata. Assorted colors; hardy.

***Phlox Subulata.** Pale blue, dark purple spot; dwarf.

***Primulas.** *Primroses.* Assorted colors; various heights.

Pyrethrum. White, pink, red daisies.

***Saxifrages Pyramidalis.** Large bunches tiny white flowers; 2 ft.

Salvia (*Azure Grandiflora*). Sky-blue flowers; 3-4 ft.

***Sedums.** Assorted colors; good ground covers.

***Sempervivums** (*Hen and Chickens*). Rosettes of succulent foliage.

***Silens.** Assorted colors.

Thalictrum Dipterocarpum. Shower of small lavender flowers. 3-4 ft.

Tritoma. Assorted colors; spike flowers.

Violas. Apricot bronze, purple, white, yellow.

Wallflowers. Assorted colors.

Wallflower (*Siberian Allioni*). Bushy plant; bright orange flowers.

Violets. Assorted colors.

Daphne Cneorum. Pink flowers; dwarf shrub; 35c and 50c.

Geraniums

SINGLE GERANIUMS

Each 15c. Set of any 6 for 75c. Postpaid.

Single Geraniums are probably the most popular bedding plants of the time. Their free growth and continuous flowering proclivities serve to keep them always in the front rank. Beds of one color have been very popular of late, and, indeed, such are hard to beat for fine display in the summer time.

Albion. Beautiful free flowering white variety. as pure in color as driven snow. Always in bloom.

Jacquerie. Rich, vivid crimson; immense trusses. The best of the dark geraniums for bedding as it blooms freely, stands the sun well and is a rarely beautiful flower.

Maxine Kavolevski. Fine large trusses of orange-scarlet flowers. The nearest approach to yellow in Geraniums.

Mildred Rival. Pure rose-pink with conspicuous white blotch on the upper petals; flowers beautifully formed and the largest of its color.

Mrs. A. Blanc. Rich salmon color, shaded to peach. A fine bedding Geranium.

Mrs. E. G. Hill. Very large trusses of single florets; color, clear salmon, with a white center; one of the finest and most distinctive varieties.

Rosamine. Handsome trusses of fine flowers of a beautiful shade of pink, flushed with violet and maculated with white. Foliage handsome dark green, heavily zoned darker. Fine robust habit.

IVY-LEAVED OR TRAILING GERANIUMS

Each 20c. Set of any 4 for 75c. Postpaid.

This class of Geraniums have a trailing or vining habit producing richly colored flowers with quite as much freedom as the upright growing sorts. They are unexcelled for planting in hanging baskets, tubs, and window boxes as well as being suitable for planting in the open ground.

Charles Turner. Deep bright pink flowers of wonderful crispness. Upper petals feathered maroon. One of the finest sorts we know of.

Col. Baden Powell. Flowers of the largest size abundantly produced in good sized trusses. Color pearl-white shaded with apple blossom. Dark blotches on upper petals.

Garden Glory. Bright scarlet suffused with rose. Upper petals veined with crimson. One of the most beautiful.

Madame Thibant. Lovely soft pink flowers; upper petals feathered with crimson-maroon. Undulated florets, in large trusses. Luxuriant waxy foliage.

DOUBLE GERANIUMS

Each 15c. Set of any 6 for 75c. Postpaid.

Like the single Geraniums, these also make admirable bedding plants, and are used for that purpose all over the civilized world. Covered with flowers all summer long, nothing more desirable could be wished for than a large bed of these fine double Geraniums, the best varieties we can find.

Alphone Ricard. One of the most famous double scarlet bedding varieties. Flowers of immense size and very brilliant in color.

Beaute Poitevine. One of the most popular salmon-pink bedding varieties. A wealth of blooms all season.

Edmond Blanc. Rich purple-violet flowers borne in great freedom. Distinct and beautiful.

Fiat. Bright salmon with flesh colored shadings. Immense trusses. Always in bloom. One of the best bedding varieties.

Madame Recamier. Snowy white flowers in large trusses produced in great profusion. Strong, vigorous grower.

S. A. Nutt. The best of the rich, dark crimson varieties; trusses massive and lasting. The most popular sort for bedding all over the country. Grown by the million.

New Carnations

Each 20c. Set of any 6 for \$1.00. Postpaid.

Belle Washburn. Flowers very large and massive with finely fringed petals. Strong non-bursting calyx. Stems stout and wiry, holding the flower erect, color rich dazzling scarlet.

Early Rose. Delicate flesh pink of exquisite shade. Finely formed, nicely fringed and very fragrant.

Harvester. Finely formed pure white flowers produced on wiry stems. The most popular white sort of the day.

Mrs. C. W. Ward. Color soft pure rose, so much admired by cut flower purchasers; flowers large and well-formed; it is a very healthy, free-blooming and taking color.

Matchless. A wonderful new white variety produced by a famous hybridizer of New York State. Large massive flowers on strong upright stems

Spectrum. Very large, finely fringed flowers produced in great freedom. Color bright scarlet of great richness. A massive full petaled flower.

Fuchsias

Each 15c. Set of any 6 for 75c. Postpaid.

DOUBLE SORTS

General Roberts. Large plum colored corolla with crimson tube and sepals. One of the finest dark colored sorts.

Purple Gem. Very large, long, royal purple corolla splashed with crimson. Bright scarlet sepals. One of the finest dark-colored sort.

Storm King. Superb double white variety; tube and sepals bright scarlet.

SINGLE SORTS

Anne Earle. Tube and sepals waxy white; corolla single clear carmine.

Lord Byron. Corolla blackish purple streaked scarlet. Dwarf and free blooming. Sepals scarlet.

Trailing Queen. Of a drooping or trailing habit; a fine plant for hanging baskets, vases, etc.; tubes and sepals rosy scarlet, corolla violet-purple.

French Cannas

For a brilliant show all summer long, nothing can excel the new French Cannas. They are of the easiest culture, growing finely in any ordinary garden soil and producing quantities of immense spikes of bright colored flowers until cut by frost. Dig the roots up and store like Dahlias. **Each 20c; Six for \$1.00. Postpaid.**

King Humbert. Immense spikes of bloom of bright orange-scarlet streaked with crimson.

Magnificent. Bronzy-green leaves.

Meteor. Large spikes of dark crimson. Flowers on tall stalks. A glorious bedding variety with handsome green foliage.

Nokomis. Vivid crimson flowers with silky sheen on the petals. Handsome bronze colored foliage. Grows four feet high. Splendid new sort.

The Ambassador. Brilliant cherry red flowers in magnificent trusses. The bronze leaved President.

The President. Immense trusses of giant crimson-scarlet flowers on heavy stalks. The finest of all Cannas.

Wyoming. Immense spikes of orange colored flowers. Bronzy purple foliage. A giant in growth.

Chrysanthemums

RARE NEW JAPANESE CHRYSANTHEMUMS

Each 20c. Three sorts, 50c. Set of any 10 for \$1.50. Postpaid.

Golden Measure. Bright golden yellow spheres of fine size and form. Broad waxy petals. A favorite for exhibition.

Pink Turner. Flowers of same size and shape as the popular William Turner, but of a beautiful silvery pink color.

William Turner. Immense globe shaped flowers of snowy whiteness. Notorious for the size of its blooms and its general satisfactory performance as a cut flower variety.

Yellow Turner. Great globes of primrose-yellow, otherwise identical with the popular William Turner. Does well in the garden.

EARLY JAPANESE CHRYSANTHEMUMS

Each 15c. Set of any 6 for 75c. Postpaid.

Betsy Ross. Globe-shaped blooms of grand size and exquisite finish produced freely during October. Color pure snow-white without the least shading.

Bronze Queen. Rich golden bronze color shaded with gold. Strong growing and very free. A most satisfactory kind.

Chrysolora. Large incurved golden yellow flowers produced freely on strong rank growth. One of the best yellows.

Early Frost. Pure snowy white flowers, the inner petals incurving and outer ones reflexing into a fine shaped bloom. Very early and free.

Oconto. Rank in growth, free in bloom, flowering in early October this fine white variety is going to become very popular.

W. H. Waite. Deep bronze shaded with gold. Of finest incurved form and splendid size. Grown extensively by florists for cutting.

Lantanas

Each 15c, postpaid.

Ameil. Richly colored sort with umbels of little florets orange-red on the outer edge and golden yellow in the center. Covered all summer with its brilliant flowers. A gem for bedding.

Countess Biencourt. Bright rose-pink, each floret centered with primrose-yellow. Each floret with orange-colored throat. Chaste and beautiful.

Begonias

FLOWERING BEGONIAS

Each 15c. Set of any three for 40c. Postpaid.

Probably the most satisfactory class of plants for house culture obtainable. Of easiest possible culture their waxy flowers produced in much profusion together with their handsome foliage make them most desirable subjects for the window gardens.

Alba Picta. Dark green leaves heavily dotted with white. Panicles of white flowers. Of bushy growth. A fine house plant.

Bertha Chaterocher. Covered all the year with bright scarlet flowers. Handsome green foliage. A fine house plant.

Foliosa. The freest-flowering Begonia we have. Makes a handsome window plant, pink flowers.

Picta Rosea. Waxy green leaves with silvery white spots. Racemes of pretty pink flowers. Free blooming.

REX BEGONIAS

Each 25c. Three for 65c. Postpaid.

They are favorites because of their beautiful leaves, variously marked with spots, colored bands, and metallic shadings.

TUBEROUS BEGONIAS

A grand class of bulbs, blooming continually throughout the summer, the flowers often being over six inches in diameter, and rival in color the most brilliant Geranium flower. As a bedding plant outdoors, or for pot culture in the house, these Begonias cannot fail to give satisfaction if given partially shaded situation.

Single Flowered Varieties. Five colors: white, pink, yellow, scarlet, and crimson. Each, 25c. Set of 5 colors, \$1.00. Postpaid.

Double Flowered Varieties. White, pink, yellow and red. Each 25c. Set of 5 colors, \$1.00. Postpaid.

Use

VIGORO

for all

House Plants



New Patented Roses

Ambassador. Talisman type. Buds large, long pointed; flowers large, very double bronze salmon; fragrant; profuse bloomer. \$1.00 each, postpaid.

Blaze. Acclaimed by the nation as the only hardy everblooming scarlet climber. \$1.00 each, postpaid.

Countess Vandal. Has been enthusiastically received by rose lovers everywhere. Its long pointed bud, its distinctive shadings of coppery-bronze suffused with soft gold and its form are a continuous "movie" developing new beauty at all times during its long life. \$1.00 each, postpaid.

Eclipse. The international sensation of the year. Long streamlined bud enhanced by ornamental sepals, of rich gold without shading. \$1.50 each, postpaid.

Mary Hart. Bud is maroon-red, opening to well-formed blossoms of deep velvety blood red with an overflow of amber. Opens perfectly when cut. \$1.00 each, postpaid.

Signora. Long bud of a warm burnt brown opening to a lighter hue toward mandarine. Plant is tall growing, with every bloom on a long stem. \$2.00 each, postpaid.

Texas Centennial. Color is blood red, toning to cerise red in center. Most striking new red of unusual color. \$1.00 each, postpaid.

Ramblers and Climbers

50c each; 3 for \$1.25 except where noted. Postpaid.

Climbing Dame Edith Helen. Same large pink blooms as bush.

Climbing Etoile de Hollande. A climbing sport of one of the best dark red bush varieties. Each 65c.

Climbing Hadley. Large, perfectly formed blooms of rich crimson.

Climbing Mme. C. Brunner. Flesh pink.

Climbing Mme. Edouard Herriot. Same as bush variety except in habit of growth.

Climbing President Herbert Hoover. Maroon, orange and gold.

Climbing Souv Claudius Pernet. Profuse bloomer like its parent bush, pure, lasting yellow.

Climbing Talisman. Similar to the bush variety.

Paul's Scarlet Climber. Flowers large, well-shaped, vivid scarlet-red, fading but little.

Tea, Hybrid Tea and Everblooming Roses

50c each; 3 for \$1.25 except where noted. Postpaid.

Angele Pernet. The most brilliantly colored mandarin and yellow rose in existence; large.

Autumn. Most extraordinarily colored rose-bud—burnt brown—on strong stems for cutting. Foliage glossy and very dark green and resistant.

Betty Uprichard. Semi-double, salmon-pink flowers stained with copper-pink on the outside.

Caledonia. Flowers large, white, full, double, high centered.

Charles P. Kilham. Very double flowers and buds of blazing scarlet-orange, opening to bright orange-pink with fiery center.

Condesa de Sastago. Distinctly two-toned, coppery pink inside and golden reverse. Each 65c.

Cuba. Large semi-single cardinal-red flowers, slightly tinted yellow.

Dainty Bess. Single rose of a soft rose pink color.

Dame Edith Helen. The flowers resemble a perfectly shaped, bright pink Francis Scott Key. The most perfumed of all pink roses.

Duchess of Athol. Bud deep bronze, flowers large double vivid orange, flushed old rose.

E. G. Hill. Great massive blooms of deep maroon, velvety on inside.

Etoile de Hollande. The finest dark red rose for general purposes.

Frau Karl Druschki. Very vigorous growth, with gigantic white buds and blooms. The most popular everblooming white rose.

Gypsy Lass. Scarlet-crimson shaded darker. Well shaped, very double blooms on strong plants. Each 65c.

Tea, Hybrid and Everblooming Roses

Golden Dawn. Bud rich straw-yellow, flushed old-rose; flower very double, sunflower-yellow, passing to lemon-yellow with age.

Hoosier Beauty. A very double, distinctive zinnia-shaped variety of bright carmine, inner petals. Glowing crimson with very dark shadings, double. A vigorous grower that is a profuse, continuous bloomer.

Imperial Potentate. Large, deep rose-pink, vigorous, profuse.

Irish Elegance. Single blossoms of bronze-pink and yellow.

Joanna Hill. Very double bloom with Indian-yellow center surrounded by gold buff petals.

Lady Margaret Stewart. Copper-orange buds, opening to bright golden yellow flowers.

Los Angeles. Flowers of pale satiny pink, richly shaded with deep rose and gold.

Margaret Anne Baxter. Long-pointed bud; flower large, full, sweetly scented, with a salmon-blush center. Robust plant. Each 65c.

Margaret McGredy. Brilliant red petals on hinges of deep gold. Buds upright. Seldom out of bloom. Upright plant, very hardy.

McGredy's Ivory. Long bud with greenish markings, opening in ivory-white; perfectly shaped double blooms, sweet scented.

McGredy's Scarlet. Large flowers are brilliant scarlet with orange base and the upper portions of the petals are lightly washed crimson.

McGredy's Yellow. Large, bright, buttercup yellow flowers; every bloom is of perfect form and sweetly scented. Rain does not damage blooms. Foliage is beautiful, large, glossy, dark, bronzy-green on dark red stems. Each 65c.

Miss Rowena Thom. Blooms of brilliant satiny pink, orange-flame center.

Mme. Cecil Brunner (*Polyanthus*) (*Sweetheart Rose*). Light pink tea-like flowers; very free bloomer.

Mme. Edouard Herriot. The original of all the bright orange-flame varieties.

Mrs. Erskine Pembroke Thom. The fine buds open into perfectly shaped flowers of rich yellow.

Mrs. Henry Bowles. Very large, double, lasting blooms of rosy pink shaded salmon on long, strong stems.

Mrs. Pierre S. DuPont. Buds are reddish gold, opening into beautiful flowers.

Mrs. Sam McGredy. Large, fairly double bloom of orange-salmon, with a suffusion of gold. Vigorous, healthy plant. One of the best of the tribe of Irish Roses.

President Herbert Hoover. Maroon, orange, and gold.

Prince Felix. Well-formed bloom rather large, of brilliant scarlet red. Tall, healthy plant of Radiance type.

Red Radiance. A bright rosy red form of Radiance.

Souvenir de Mme. Boulet. Dark cadmium-yellow; large full flower.

Sunkist. Brownish orange sport of the well-known Joanna Hill. Flowers even larger. Same plant qualities.

Talisman. Fragrant bloom of glowing golden yellow outside, and stained with copper-red and orange rose on the inside of the petal.

Ville de Paris. Buds of bright yellow which open into fadeless double blooms.

Use
Ortho Garden Volk
For Spraying Roses

Deciduous Shrubs

DELIVERIES MADE FROM
NOVEMBER UNTIL MAY

Almond (*Prunus*). Pink flowering. Dwarf shrub. Shipping size 18-24 inches. Each 75c. Postpaid.

Althea (*Rose of Sharon*). Late summer blooming, colors pink, white or red. Shipping size 30-36 inches. Each 75c. Postpaid.

Azalea (*A. Mollis*). In early spring is covered with gorgeous flowers before the leaves appear. Colors mostly orange, yellow and salmon pink. Shipping size 12-18 inches. Each \$1.50. Postpaid.

Buddleya (*Magnifica: Summer Lilac*). Slender branches that terminate in flowers of lavender blue. Shipping size 24-30 inches. Each 75c. Postpaid.

Calycanthus (*Floridus: Sweet-scented Shrub*). Double, dark crimson flowers, very fragrant and blooms all season. Shipping size 15-18 inches. Each 75c. Postpaid.

Deutzia (*Gacilis*). Low-growing, slender branches, covered with a profusion of flowers. White with blush of pink in the bud. Shipping size 12-15 inches. Each 75c. Postpaid.

Deutzia (*Lemoinei*). Flowers in large cluster of pure white. Grows to 6 feet high. Shipping size 24-30 inches. Each 75c. Postpaid.

Deciduous Shrubs

Continued

Forsythia (*Golden Bell*). Blooms in dense masses of golden-yellow flowers in early spring. Shipping size 30-36 inches. Each **75c**. Postpaid.

Honeysuckle (*Bush: Pink Tartarian*). Bushy, upright growth. Flowers freely. Red and orange berries stay on until fall. Shipping size 18-24 inches. Each **75c**. Postpaid.

Hydrangea (*Japanese Otaksa*). Blue and pink. Shipping size 12-18 inches. Each **75c**. Postpaid.

Paniculate Grandiflora (*Tree Hydrangea*). Pure white, afterwards changing to pink. Shipping size 24-30 inches. Each **\$1.00**. Postpaid.

Lilac (*Syringa Vulgaris*). *Common*. Single, white or purple. Shipping size 30-36 inches. Each **75c**. Postpaid. *Grafted*. Double or single, white or purple. Shipping size 2-3 feet. Each **\$1.00**. Postpaid.

Mock Oranges (*Syringa*). White, creamy flowers, very fragrant. Shipping size 30-36 inches. Each **75c**. Postpaid.

Quince (*Japanese Flowering*). Scarlet flowers. Shipping size 18-24 inches. Each **75c**. Postpaid.

Spirea. Flowers red in dense spikes. Blooms most of summer. Maturity height 4 feet. Shipping size 18-24 inches. Each **60c**. Postpaid.

Bridal Wreath. Blooms during May and June; long sprays of large white flowers. Very hardy and ornamental year round. **60c**. Postpaid.

Crimson Spirea. Deep red flowers. Blooming all summer. Shipping size 18-24 inches. Each **60c**. Postpaid.

Thunbergii Spirea. Shipping size 18-24 inches. Each **60c**. Postpaid.

Van Houetti's. Flowers white in clusters. May. Shipping size 24-30 inches. Each **60c**. Postpaid.

Snowball. Flowers globular, pure white, in May. Shipping size 18-24 inches. Each **60c**. Postpaid.

Tamarix (*African*). A tall slender irregular shrub with feathery foliage and small delicate pink flowers. 3 to 4 feet high, **\$1.00**. Postpaid.

Weigelia. Free-flowering shrub. Shipping size 24-30 inches. Each **75c**. Postpaid.

Deciduous Trees

SHADE AND ORNAMENTAL

Bechtel's Flowering Crab. Large, double, fragrant, pinkish, rose-like flowers, covering entire tree. Apple-like foliage turns bronze in fall. Forms a rounded compact, dwarf tree. **\$1.00**, f.o.b. Portland, Ore.

Birch. *White*, common, 5-6 feet. Each **\$1.00**. Postpaid. *Cut Leaf* (*B. Alba*). Silvery-white bark, slender, drooping branches. 5-6 feet. Each **\$1.25**, f.o.b. Portland, Ore.

Catalpa. Splendid trees. White flowers, bright foliage. 5-6 feet. Each **\$1.25**, f.o.b. Portland, Ore.

Catalpa Bungei. Dwarf, dense, round-headed variety. Much in outline like the popular Bay trees, but is hardy and better adapted for the garden. 5-6 ft. Each **\$1.50**, f.o.b. Portland, Ore.

Cherry (*Japanese Rose-flowered*). Pendulous cluster of small rose-pink flowers. Effective at ends of vistas or with trellis support. Early bloomer. Two-year, trees, 5 to 6 feet, each **\$2.00**. One-year trees, 4 to 5 feet, each **\$1.50**, f.o.b. Portland, Ore.

Dogwood (*Pacific*). Creamy white flowers; grows in any soil or climate Vigorous growth; leaves highly colored in fall. 5 to 6 feet. Each **\$1.50**, f.o.b. Portland, Ore.

Elm (*American*). Tall, wide spreading tree, light gray trunk. 6 to 8 feet. Each **\$1.50**. Postpaid. 5 to 6 feet. Each **\$1.00**, f.o.b. Portland, Ore.

Hawthorne. *Paul's Double Scarlet*. 5-6 feet. Each **\$1.25**. 6-8 feet. Each **\$1.50**, f.o.b. Portland, Ore.

Horse Chestnut (*A. Hippocastanum*). Tall; large divided leaves; long panicles of fragrant, snowy-white flowers. Good shade tree. 5 to 6 feet. Each **\$1.75**, f.o.b. Portland, Ore.

Maple. *Norway*. 5-6 feet. Each **\$1.00**, f.o.b. Portland, Ore.

Mountain Ash. *European*. White flowers, red berries. 5-6 feet. Each **\$1.25**, f.o.b. Portland, Ore.

Oak (*Red Leaved*). Tall; stout spreading branches; lobed leaves; beautifully colored. 6 to 8 feet. Each **\$2.25**, f.o.b. Portland, Ore.

Peach (*Flowering*). Large, single and double, light, deep red, and cerise and maroon flowers. 4 to 5 feet. Each **\$1.25**. Postpaid. 3 to 4 feet. Each **\$1.00**, f.o.b. Portland, Ore.

Plum (*Bleireiana*). Purple tinted foliage, reddish bronze later. Medium size, semi-double fragrant flowers. Early bloomer. 4 to 6 feet. Each **\$1.25**, f.o.b. Portland, Ore.

Thundercloud. Dark purple foliage, pink flowers. 4 to 6 feet. Each **\$1.25**, f.o.b. Portland, Ore.

Poplar (*Carolina*). Broad, wide-spreading branches; dark bark. 6 to 8 feet. Each **75c**, f.o.b. Portland, Ore.

Lombardy. Straight, narrow, spirelike. 6 to 8 feet. Each **75c**, f.o.b. Portland, Ore.

Weeping Willow (*Babylon*). Long, slender, drooping branches; bright green leaves. 6 to 8 feet. Each **\$1.00**, f.o.b. Portland, Ore.

Evergreen Shrubs

Abelia (*Grandiflora*). Small, glossy leaves and tubular-shaped flowers of a blush-pink color. Shipping size 12-18 inches. Ea. **50c**, f.o.b. Portland, Ore.

Acuba (*Japanese Laurel*). *Japonica Variegated*. Yellow spotted leaves. *Japonica Green*. Dark, glossy, green leaves. Shipping size 12-18 inches. Each **75c**, f.o.b. Portland, Ore.

Azalea. Crimson. Loaded in early spring with masses of scarlet flowers. Thrive best in cool, moist situation. Excellent for massing or in front of other shrubs. Shipping size 6-8 inches. Small plants each **35c**, f.o.b. Portland, Ore.

Daphne (*Japan*). (*Pink Daphne*). Blooms early spring. Shipping size 9-12 inches. Each **75c**, f.o.b. Portland, Ore.

Camelia (*China and Japan*). Small trees with shining waxy leaves and flowers. Thrive best in Partial shade. Shipping size 12-15 inches. Each **\$1.00**, f.o.b. Portland, Ore.

Cotoneaster (*C. Franchetti: China*). Pink flowers, red berries in the fall. Shipping size 12-15 inches. Each **50c**. 24 to 30 inches. Each **75c**, f.o.b. Portland, Ore.

C. Horizontalis (*Trailing*). Nearly deciduous. Leaves small, turn red in winter. Berries red, stay all winter. Excellent for terrace; hardy. Each **75c**, f.o.b. Portland, Ore.

Laurustinus. Dark green foliage. Small, white flowers. Very hardy. Shipping size 10-18 inches. Each **50c**, f.o.b. Portland, Ore.

Heather (*Irish Belle*). Purple, bell-shaped bloom in July or August. 12 to 18 inches. Each **75c**, f.o.b. Portland, Ore.

Mediterranean. Pink, bell-shaped bloom in fall and winter. 10 to 12 inches. Each **75c**, f.o.b. Portland, Ore.

Pyracantha (*Lalandi*). Sturdy, bushy shrubs; orange berries. 18-24 inches. Each **75c**, f.o.b. Portland, Ore.

Coccinea. Red berries. Very robust type. 18-24 inches. Each **75c**, f.o.b. Portland, Ore.

English Holly (*Grafted*). Shiny, spiny, dark green leaves. Bright red berries. Compact bush. 12-15 inches. Each **\$1.50**, f.o.b. Portland, Ore.

Variegated Holly (*Grafted*). Variegated leaves; bright red berries; compact bush. 12-15 inches. Each **\$1.50**, f.o.b. Portland, Ore.

Vines and Creepers

Clematis (*Jackmanii*). Large purple flowers: requires rich, deep soil; plenty of water; perfect drainage; sunny position. Each **\$1.00**. Postpaid.

Mme. Edw. Andre. Red flowering. Each **\$1.00**. Postpaid.

Paniculata. White flowering. Each **75c**. Postpaid.

Honeysuckle (*Hall's Japanese*). Vigorous grower; white flowers changing to yellow. Blooms June to August. Each **75c**. Postpaid.

Ivy (*Boston*). Fine for brick or stone wall; quick growing. Each **75c**. Postpaid.

Virginia Creeper. Vigorous grower; large leaves turn bright colors in fall. Each **75c**. Postpaid.

English Ivy. Evergreen shrubby vine; large, dark green leaves. Each **75c**. Postpaid.

Jasmine. Splendid for sheltered places. Pink or white flowers. Each **75c**. Postpaid.

Wistaria (*Sinesis*). Purple or white flowers in long, drooping racemes. Each **75c**. Postpaid. Grafted vines. Each **\$1.50**. Postpaid.

Hedge Plants

Barberry (*Japanese Thunberg's*). Arching growth; yellow flowers; red berries; foliage has beautiful coloring in fall. 18-24 inches. Each **40c**. Dozen **\$4.00**, f.o.b. Portland, Ore.

Red Leaved. Foliage is a rich, lustrous, bronzy red at all times. In fall foliage becomes orange, scarlet and red shades with scarlet berries. Should be planted in full exposure to sun. 15-18 inches. Each **75c**, f.o.b. Portland, Ore.

Wilsoni. Dwarf. Has glossy green leaves, long spines, yellow flowers, red berries. 12 to 15 inches. Each **75c**, f.o.b. Portland, Ore.

Boxwood. Small leaves of dense and compact growth. 8 to 12 inches. Each **30c**; dozen **\$3.00**, f.o.b. Portland, Ore.

Laurel. English (*Cerasus*). Growth shrub-like, with broad dark green leaves. Two feet apart for dense hedge. Shipping size 12 inches. Each **30c**. Dozen **\$3.00**, f.o.b. Portland, Ore.

Privet. California. Our best plant for hedges. Plant in double row two feet apart, 6 inches between plants. Shipping size 24-30 inches. Ten for **\$1.00**. Per hundred **\$7.50**, f.o.b. Portland, Ore.

English. (*Hardy*). Leaves smaller. Shipping size 24-30 inches. Ten for **\$1.00**. Per hundred **\$7.50**. f.o.b. Portland, Ore.

NEWER VARIETIES

Byron L. Smith. Very lovely, refined lavender pink, with cream throat. 3 for 20c. Postpaid.

Blue Triumphantor. Pale light blue of large size and tall spike. Each 10c. Postpaid.

Commander Koehl. A beautiful large dark scarlet, a most unusual variety. Each 10c. Postpaid.

Coryphee. A lovely soft rose pink with many blooms, open. 3 for 25c. Postpaid.

Debonair. Salmon pink with deep cream throat. Tall and lovely. 3 for 25c. Postpaid.

Doublet. Prim, cream and yellow, ruffled and dainty. 3 for 20c. Postpaid.

Evelyn Kirtland. Tall pink, darker throat, a general favorite. 3 for 20c. Postpaid.

Golden Measure. Tallest deep yellow, very desirable. 3 for 20c. Postpaid.

Heavenly Blue. Lovely aniline blue. One of the best and tallest light blues. 3 for 25c. Postpaid.

Hinemoa. Very striking smoky rose with large clear yellow blotch. Each 10c. Postpaid.

Jubilee. Huge lavender pink. Always admired. 3 for 25c. Postpaid.

Loyalty. Pure yellow, deeper throat. Strong, husky plant. 3 for 20c. Postpaid.

Mammoth White. The largest pure white in existence. Very heavy foliage and spike. Each 10c. Postpaid.

Mildred Louise. Beautiful clear strawberry pink, blending to pinard yellow throat. Very popular. Each 10c. Postpaid.

Minuet. A beautiful clear lavender, a very desirable variety. 3 for 20c. Postpaid.

Morocco. Large, very deep red, almost black. 3 for 25c. Postpaid.

Nancy Hanks. Apricot and orange, wide open bloom of medium height spike. 3 for 20c. Postpaid.

Orange Butterfly. Bright orange of fine substance. A spike of bloom looks like a flock of butterflies in flight. Dainty and pretty. 3 for 20c. Postpaid.

Our Selection. Deep salmon tinged purple-lavender, blotched throat, many open, a great prize winner. 3 for 20c. Postpaid.

Peach Rose. Rose pink, darker throat, a prize winner. 3 for 20c. Postpaid.

Pelegrina. The newest and best of Pfitzer's dark blues. 3 for 25c. Postpaid.

Red Fire. Bright red self color. Does not burn. 3 for 20c. Postpaid.

Rose Ash. Ashes of roses, tall and unique. 4 for 20c. Postpaid.

Red Glory. Very large velvety red. 3 for 20c. Postpaid.

Salbach's Pink. Large, wide open, glowing geranium pink with soft carmine tongue and throat marking. Long graceful flower spike. 3 for 25c. Postpaid

Mixed Gladiolus. 35c per dozen; 100 for \$2.10. Postpaid.

Senorita. Clear wide open orange, shading to salmon, lower petals bright orange yellow. Carmine tongue and penciling. 3 for 25c. Postpaid.



Gladiolus

TEN BEST CUT FLOWER VARIETIES

All blooming size 1½ inches. Priced per dozen postpaid.

Albatross. Pure white that reaches a height of 5 feet with 5-inch blooms. Dozen 60c.

Betty Nuthall. Giant orange-coral. Dozen 40c.

Giant Nymph. Fine pink. Dozen 35c.

Gloriana. Finest pure salmon with yellow throat. Dozen 40c.

Golden Eagle. Early pure yellow. The florist's favorite. Dozen 40c.

Golden Dream. Tall pure yellow. Dozen 35c.

Los Angeles. Good cut flower, pink. Dozen 35c.

Mrs. Leon Douglas. Unusually large begonia rose or strawberry red. Striped with scarlet. Dozen 40c.

Pfitzer's Triumph. Immense bright orange-scarlet florets on fine stalks. Dozen 40c.

Paul Pfitzer. Early red purple. Dozen 50c.

Fruit Trees

AUTUMN AND WINTER APPLES

Baldwin. Large, rounded, deep bright red. Very productive.

Delicious. Fruit equals name in every respect. Keeps until April.

Grimes Golden. Rich golden yellow. Flesh tender and juicy.

Jonathan. Long lived and an early bearer. Fine quality.

Northern Spy. Large, round, greenish-yellow. Requires good soil.

Rose Beauty. Fruit large, red, striped.

Spitzenberg. Yellowish, with broken stripes of bright red.

Wealthy. Medium, whitish-yellow, shaded with deep red.

Winesap. Fruit red, large, round-oblate, good, late keeper.

Winter Banana. Market fruit. Pale yellow with pink blush.

Yellow Newtown. Fruit yellow, medium size, tender, crisp, excellent quality

First Grade Two years (branched). Each **60c.** 10 for **\$5.00.** One year, 4 to 5 feet. Each **45c.** 10 for **\$3.50.** Prices packed ready for shipment.

SUMMER APPLES

Gravenstein. Fruit medium in size, striped with crimson, splendid for table and cooking. Tree hardy, healthy and productive.

Red Astrachan. Fruit bright crimson, round. Tree large, hardy and very productive.

Yellow Transparent. Fruit bright yellow, conical, large, subacid, very early.

First Grade. Two years (branched). Each **60c.** 10 for **\$5.00.** One year, 4 to 5 feet. Each **45c.** 10 for **\$3.50.** Prices packed ready for shipment.

CRABAPPLE

Hyslop. Red striped. Very early, juicy, crisp.

Red Siberian. Yellow with scarlet cheek. Bears abundantly.

Transcendent. Very large and excellent for tasty cider.

First Grade. Two years (branched). Each **60c.** 10 for **\$5.00.** One year, 4 to 5 feet. Each **45c.** 10 for **\$3.50.** Prices packed ready for shipment.

Apricots. *Moorpark.* Excellent for canning and drying. Free stone. *Royal.* Sweet, rich, juicy. Good dryer and canner. *The Lewis.* Best flavored. Very hardy with juicy fruit. *Tilton.* Large. Rich color, high flavor. Very productive. First Grade. Two

years. 4 to 6 feet. Each **60c.** 10 for **\$5.00.** One year. 3 to 4 feet. Each **40c.** 10 for **\$3.00.** Prices packed ready for shipment.

Cherries. *Bing.* Large, dark brown or black. Very fine, tasty and sweet. *Black Republican (Lewelling).* Large, black and sweet. *Lambert.* Largest size. Deep, rich red. Fine firm flesh. *Royal Ann.* A magnificent cherry of the largest size. *Waterhouse (Long Stem).* Small tasty fruit, light red. First Grade. Two years, 4 to 6 feet. Each **70c.** 10 for **\$6.00.** One year, 4 to 6 feet. Each **60c.** 10 for **\$5.00.** Prices packed ready for shipment.

Pie Cherries. *Kentish.* Nearly black. Medium to large sizes. *Large Montmorency.* The most popular sour cherry grown. *Late Duke.* Large, light red. Excellent taste, sub-acid. *May Duke.* Large, rich, dark red, sub-acid. May bearer. First Grade. Two years, 4 to 6 feet. Each **70c.** 10 for **\$6.00.** One year. 4 to 6 feet. Each **60c.** 10 for **\$5.00.** Prices packed ready for shipment.

Peaches. *Early Crawford.* Fruit yellow with beautiful blush. *Freestone.* Tree large and vigorous. *Elberta.* Fruit yellow, large, handsome. Freestone. *Early Elberta.* Same as above, except larger fruit and earlier bearing. *Hale's Early.* Extra fine quality. Freestone. *Late Crawford.* Large, yellow, dark red, juicy freestone. *Mayflower.* Red, freestone, and extremely early. *Rochester.* Fruit yellow, flesh yellow, freestone. Tree hardy and productive. First Grade. Two years, 4 to 6 feet. Each **60c.** 10 for **\$5.00.** One year, 3 to 4 feet. Each **40c.** 10 for **\$3.00.** Prices packed ready for shipment.

Pears. *Autumn Varieties.* *Bartlett.* Fruit large, thin skin, clear yellow, soft blush. Trees large and productive. *Beurre D'Anjou.* Fruit large, greenish to yellow; very good in quality. *Beurre Bosc.* Fruit large, with long tapering neck; greenish-yellow, often overlaid with very heavy russet. Highly flavored. *Fall Butter.* Yellow, sweet and meaty. September. First Grade. Two years, 4-6 feet. Each **60c.** 10 for **\$5.00.** One year, 4 to 6 feet. Each **50c.** 10 for **\$4.00.** Prices packed ready for shipment.

Winter Varieties. *Winter Bartlett.* Undoubtedly one of the few pears of recent introduction of real merit. *Winter Nelis.* Medium. Skin yellowish-green. Flesh yellowish-white. Fine grained. December. First Grade. Two years, 4 to 6 feet. Each **60c.** 10 for **\$5.00.** One year, 4 to 6 feet. Each **50c.** 10 for **\$4.00.** Prices packed ready for shipment.

Plums. *Bradshaw.* Reddish-purple. Adheres partially to stone. *Coe's Golden Drop.* Large, light yellow. Late September. *Danison Shropshire.* Dark purple. Very firm. Flesh green. *Maynard.* Dull red, rich and sweet. Sturdy, quick growing. *Peach Plum.* Very large. Skin brownish red. Freestone. Bears in July. *Blood Plum.* Large, dark red from skin to pit. Bears well. *Satsuma.* Bears in August. Flesh deep blood red. Great favorite for jams. *Washington.* Fruit light yellow, round-oval, sweet, excellent quality. *Yellow Egg.* Very large, deep golden, rather acid. Preferred for canning. First Grade. Two years, 4 to 6 feet. Each **50c.** 10 for **\$4.00.** One year, 4 to 6 feet. Each **40c.** 10 for **\$3.00,** f.o.b. Portland.



THE NEW BOYSENBERRY

Fruit Trees

Continued

Prunes Hungarian. Very large, dark red, juicy and sweet. *Italian (Fellenberg).* Dark purple, flesh greenish yellow. *New Standard.* Trees large. Enormous yield. Freestone. *Petite (French).* Medium, egg-shaped. Violet purple. Sugary. First Grade. Two years, 4 to 6 feet. Each **50c.** 10 for **\$4.00.** One year, 4 to 6 feet. Each **40c.** 10 for **\$3.00.** Prices packed ready for shipment.

Quince. Pineapple. Flavor is suggestive of pineapple. Resembles the orange quince, making superior jelly. Can be eaten raw, and has a most exquisite and delicious flavor. September. First Grade. One year, 3 to 5 feet **70c.** 10 for **\$6.00.** Prices packed ready for shipment.

SPECIAL

Your selection of any 5 fruit trees, 3 to 4 feet, \$1.90 Postpaid.

Nut Trees

Almond (Nut Bearing). Almonds can be grown successfully in many sections of Oregon and Washington. We can supply most of the leading varieties at price listed. *Nonpariel.* Nut sweet, shell thin. First Grade. One year, 4 feet. Each **60c.** 10 for **\$5.00.** Prices packed ready for shipment.

Butternut. A beautifully formed tree bearing a rough coated nut of most attractive flavor. Well known to the Middle West. Succeeds fairly well in the Pacific states. Each **\$1.10.** Price packed ready for shipment.

Filberts. Barcelona. Magnificently large nut from Spain. First Quality. Can be grown as low standard tree or bush. *Du Chilly.* The largest filbert on the Pacific Coast. Nuts are broad, full-fleshed and sweet. *Du Chilly* is a good pollenizer for *Barcelona.* *White Aveline.* This, used with the *Du Chilly*, considered best varieties for planting with *Barcelona* for pollenizer. First Grade. 3 to 4 feet. Each **70c.** 10 for **\$6.00.** 2 to 3 feet. Each **60c.** 10 for **\$5.00.** Prices packed ready for shipment.

Grafted Walnuts (Soft Shelled). We offer a splendid strain, grafted on 4-year California Black Walnuts. Sturdy, thrifty trees with big, fibrous roots. The best to plant. Comes to bearing much younger than seedling walnuts. Can be shipped by express or truck. First Grade. 3 to 4 feet. Each **\$1.00.** 10 for **\$9.00.** 4 to 5 feet. Each **\$1.50.** 10 for **\$14.00.** 6 to 8 ft. Each **\$2.00.** 10 for **\$18.00.** Prices packed ready for shipment.

Berry Plants

The Pacific Northwest is one of the outstanding berry sections of the world. With soil and climatic conditions being ideal for the raising of these much enjoyed fruits we highly recommend, where space is sufficient, that every one have a berry patch. Below we offer the leading varieties of berry plants at extremely low prices.

BOYSENBERRY. A new variety produced by crossing blackberries, raspberries and loganberries. The flavor is a very pleasing blend of each of the three varieties. It has few and soft seeds. The great size is hard to explain—1 inch in diameter by 1½ inches long. Is consistently a heavy bearer and comes into good bearing the next year after planting. Boysenberry is a vigorous grower and should not be planted closer than six feet apart. The fruit season is longer than most varieties, lasting about two months. Each **15c;** 7 for **\$1.00;** 15 for **\$2.00;** 50 for **\$6.60;** 100 for **\$10.00,** f.o.b. Portland, Ore.

Blackberries. Eldorado. Himalaya Giant (Evergreen everbearing). 2 year plants, each **20c;** 10 for **\$15.00.** 1 year plants, each **15c;** 10 for **\$1.25;** 100 for **\$10.00.** Prices f.o.b. Portland, Ore.

Black Caps. 2 year plants, each **25c;** 10 for **\$2.25.** One year plants, each **20c;** 10 for **\$1.75.** Prices postpaid.

Currants. Oregon shipments only. *Perfection,* largest, most prolific. Bright red, rich flavor, mild, sub-acid. Each **20c;** 10 for **\$1.75.** Prices f.o.b. Portland, Ore.

Gooseberries. Oregon shipments only. *Oregon Champion,* large, green, sweet, fine. Each **20c;** 10, **\$1.75.** Prices postpaid.

Loganberries. Two year plants, each **20c;** 10, **\$1.75;** 100, **\$15.00.** One year plants, each **15c;** 10, **\$1.25;** 100, **\$10.00.** Prices f.o.b. Portland, Ore.

Raspberries. *Lloyd George*, Tips, 100 for \$2.00; 50 for \$1.25; 25 for 75c. Transplants, 100 for \$7.50; 50 for \$4.00; 25 for \$2.25; 12 for \$1.20, f.o.b. Portland, Ore.

Strawberries. Diamond Quality Strawberry Plants are large, vigorous, healthy and heavy rooted. They have large full crowns. Carefully grown and are free from disease and pests. We dig as ordered and pack for shipment in well-ventilated crates. Grown from our select strains and always true to name; no substitution allowed without instructions from the purchaser. All prices, except noted; 25 for 35c; 100 for 95c; 500 for \$4.25; 1000 for \$7.50, f.o.b. Portland, Ore.

Banner. A beautiful dark red. An exceptionally sweet variety and a real heavy bearer.

New Oregon. Most uniform and heaviest yielding main crop strawberry. Large, firm, of fine form, average 15 to the quart box. Brilliant deep rich red, with glossy varnished appearance. Color extends through to center and they are never hollow. Flavor is suggestive of wild berry; an early bearer and holds up in size and quality throughout the season.

Marshall. One of the best all-round strawberries. Very large and fine flavored throughout the entire bearing season. A splendid market and table berry.

Mastodon Everbearing. The largest everbearing berry grown. Is the most prolific, the firmest, the most beautiful berry with the real strawberry flavor. Bears early and late and can be picked all spring. Every garden patch should have a few of these wonderful plants. 25 for 50c; 100 for \$1.75; 500 for \$8.00; 1000 for \$14.00, f.o.b. Portland, Ore.

Youngberry. A real special! These berries are a cross between the loganberry and the dewberry. An exceptionally fine flavored, very productive berry. Bears early and commands the highest market prices. The fruit colors well and is exceptionally sweet and large. Color, jet black. Ten plants of this variety will make a row eighty feet long. Transplants, each 15c; 10, \$1.25; 100, \$10.00. Prices postpaid.

Grapes. *Campbell's Early*. Nearly round, black. *Concord*. Large, black grape. Bunches compact. *Delaware*. Bright red. *Lucile, Niagara*. Large, roundish, uniform white. *Worden (Improved Concord)*. Fruit black and large, skin tender. Vigorous plant. Two year plants, each 30c; 3, 75c; 12, \$3.00. Prices f.o.b. Portland, Ore.

Vegetable Plants

FOR TRANSPLANTING

Asparagus. Giant Washington, Mary Washington. 1 year plants; 12 for 40c; 50 for 75c; 100 for \$1.25; 1000 for \$7.00. 2 year plants; 12 for 50c; 50 for \$1.00; 100 for \$1.50; 1000 for \$10.00. Prices postpaid.

Cabbage. All varieties listed under cabbage seed, state kind desired. 12 for 25c; 100 for \$1.25; 1000 for \$10.00. Prices postpaid.

Cauliflower. All varieties listed under cauliflower seed, state kind desired. 12 for 30c; 100 for \$2.00; 1000 for \$16.00. Prices postpaid.

Celery. All varieties listed under celery seed, state kind desired. 12 for 25c; 100 for \$1.50. Prices postpaid.

Hop Roots. 3 for 25c; 12 for 75c; 100 for \$3.50. Prices postpaid.

Horseradish Roots. (*Crowns*) 3 for 25c; 12 for 50c; 100 for \$2.00 (*Commercial Cuttings*) 100 for \$1.25; 1000 for \$10.00. Prices postpaid.

Kale. Thousand Headed, 12 for 25c; 100 for \$1.25; 1000 for \$10.00. Prices postpaid.

Lettuce (*transplants*). All varieties listed under lettuce seed, state kind desired. 12 for 25c; 100 for \$1.25; 1000 for \$10.00. Prices postpaid.

Pepper. Chinese Giant and California Wonder. 12 for 30c; 100 for \$2.00; 1000 for \$10.00. Prices postpaid.

Rhubarb. Riverside Giants. Each 20c; 12 for \$1.50; 100 for \$7.50. Prices postpaid.

Tomatoes. All varieties listed under tomato seed, state kind desired. 12 for 30c; 100 for \$2.00; 1000 for \$16.00. Prices postpaid.

Annual Flower Plants

We list these plants under their general classification, for variety desired please consult the write-ups for each, under flower seeds. If no variety is stated we will send mixed colors. Prices on all plants, with the exception of Pansies are: **50c per dozen, postpaid.**

Asters	Marigold
Alyssum	Petunia
Ageratum	Phlox
Calendula	Portulaca
Clarkia	Salvia
Cosmos	Salpiglossis
Godetia	Scabiosa
Larkspur	Stocks
Lobelia (<i>dwarf and trailing</i>)	Snapdragons
Mignonette	Verbena
	Zinnia
	Pansies (\$1.00 per doz.)

TRY THE
NEW
BOYSENBERRY
TASTY and BOUNTIFUL

Protect Your Garden Against Soil Pests



• Naphthalene is a soil insecticide, used for the repelling of such soil pests as Wire Worms, Maggots, Snails, Gophers, etc., and can be used without burning or flavoring even the most tender root crops. It is used by bulb growers for protection against Thrips, White Fly, and certain other stinging insects.



• Naphthalene should be sprinkled in the trenches at the time of planting seed. The repellent in Naphthalene is the continual gas it gives off when moistened (this gas is neither harmful to pets or humans). It should always be used when planting Beets, Carrots, Radishes and other root crops. One pound package is sold for 15c by all better seed dealers.

PORTLAND SEED COMPANY
PORTLAND SEATTLE EUREKA



It's New!



BIG BOY
GARDEN
PEAS



4 oz. Packet 15c
8 oz. Packet 25c
16 oz. Packet 35c

Postpaid



● Presenting a new garden pea especially developed for Western gardens. The sort that delights the market gardener and makes the housewife smile.

● Enormous dark green handsome pods, usually containing ten or more large luscious peas of excellent flavor and texture; produced on sturdy, up-standing vines.

Vine—2 feet, coarse dark.

Pod—4½–5 inches, dark, pointed.

Seed—very large, wrinkled.

Season—74 days.

PORTLAND SEED COMPANY

PORTLAND, OREGON